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AUTHOR	Banathy, Bela H.; And Others
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ABSTRACT

This instructional system is designed to train individuals in the role of Educational Information Consultant (EIC). The EIC serves as a linkage agent between the worlds of educational research and practice by (1) negotiating with a client concerning information need, (2) retrieving pertinent information, (3) transforming the information, (4) communicating the information to the client, and (5) self evaluation. This EIC instructional system is intended for independent study by a Learning Team of three to five persons and is divided into seven instructional modules. Instructional activities in the modules consist of four phases: (1) individual preparation, (2) team learning, (3) team application, and (4) individual and team performance evaluation. Appended are instructions for compiling a 'paper trail' or record of decisions and actions taken in serving a client. (Author/STS)

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The Educational Information Consultant

Skills in Disseminating Educational Information

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY Far West Laboratory for Educational Research and Development

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

TRAINING MANUAL

Bela H. Banathy
Wayne E. Rosenoff
Nancy C. Adelson
Charles L. Aldrich
Monica L. Schmitz

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THE FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT is a regional educational laboratory, established through a Joint Powers Agreement in February, 1966. Present signatories include the Regents of the University of California, the California State Board of Education, the Trustees of the California State Colleges, the Superintendent of Schools of the County of Monterey, the Board of Education of the San Francisco Unified School District, the Board of Regents of the University of Nevada, the Nevada State Board of Education, the Board of Regents of the University of Utah, and the Utah State Board of Education.

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THE EDUCATIONAL INFORMATION CONSULTANT: SKILLS IN DISSEMINATING EDUCATIONAL INFORMATION

Preface

The effort to protect and enrich our human environment--like the efforts to preserve and improve our physical environment--depends on rapid dissemination and accurate application of information. In the educational field, networks are being formed to coordinate information resources at many locations and levels and to make possible better utilization of current knowledge and research on innovations in education. New positions and new skills are required to serve these networks. The emphasis of this instructional system is therefore on development of the skills, knowledge, and attitudes needed for future service to the networks in the role of Educational Information Consultant (EIC).

The instructional system has three qualities which, together, offer the student a learning experience quite different from the familiar ones. First, although the skills introduced relate directly to the emerging role of the EIC, they provide the student with tools which can also be directly applied to his own research, retrieval, and utilization needs.

A second distinguishing quality is the opportunity the training provides for each student to satisfy his own interest in a specific problem area. Each student takes another student's real information problem and attempts to resolve it as he learns the processes comprising the EIC role. This personal, student-student interaction in a real problem area typifies the idea of a server role, rather than the servee role frequently expected of students in the traditional instructional environment.

Finally, the training materials include checklists, concise "how-to-do-it" guidelines, and other job aids of proven utility for performing the EIC role. They are tools to do the job in the real world. The future reference value of these materials will become apparent as they are presented, explained, and then applied during the training.

This instructional system is designed to train individuals to work in the role of an EIC within the educational system. The EIC serves as a linkage agent between the research world and the day-to-day educational world. Such a person may well be considered a potential change agent within the educational process. Working as a linker, the EIC serves a particular client by negotiating a specific problem with him, retrieving information pertinent to this problem, transforming the information into a package of material understandable to the client, and communicating the problem-related information package in such a way as to fulfill the client's initial request. The final, and possibly most important, aspect of the total role is the evaluation stage. Through both self- and client-generated feedback, the EIC synthesizes the data collected, evaluates the performance of his role with a particular client, and plans a strategy for change if such is indicated by the evaluation process. Together, these five processes define

the role of the EIC both as a linkage agent and a change agent within education.

The Learning Team Form of the EIC Instructional System

A. Definition and Overview

Independent study, as a concept, has existed in higher education for nearly 40 years. Generally, this form of study takes place on the college or university campus and involves the interaction of two people, a student and a professor, in a mutually agreeable relationship to foster the intellectual growth of the student. Recently, through the creation of university extensions, this concept has evolved to include students working on their own, at their own rate, at their own convenience within their home, and often separated by many miles from the nearest college or university campus.

As an extension to the already proven concept of individualized instruction, this instructional system proposes to add the concept of small-team interaction. The combined effect may create a highly interactive and innovative learning environment couched within the reality framework of the emerging educational information networks. This form of the instructional system is called the "Learning Team."

The concept of a Learning Team is quite unique in the area of independent study programs. Although man tends to spend the majority of his life moving from one group to another and coexisting in several groups at one time, this phenomenon of human behavior has not as yet been capitalized upon in the area of independent study. The successful synthesis of group dynamics and individualized instruction is therefore the ultimate goal of this form of the instructional system. By melding principles of group dynamics and independent study in an innovative way, you will become the beneficiary of a unique, interactive, self-directive, small-team (three to five persons) instructional system.

B. Explanation of the Learning Team Structure

1. Organization. The EIC Learning Team form is divided into seven instructional modules: (1) Introduction, (2) Simulation of the EIC Role, (3) Negotiation, (4) Retrieval, (5) Transformation, (6) Communication, and (7) Evaluation. Module 1 introduces the EIC role within the context of the emerging educational information dissemination network. Module 2 consists of a simulation exercise designed to orient you to the major processes of the EIC role. Modules 3 through 7 each consist of training elements designed to build skills and knowledge in one of the five major processes.

2. Time. The Learning Team form is designed to fit into ten, three-hour "group" sessions and approximately 30 hours of out-of-group individual activities. The time requirement for the out-of-group activities varies

from session to session. Each three-hour group session represents one module or a portion of a module.

3. Instruction. Instructional activities in the five major process modules have four phases: (1) individual preparation, (2) team learning, (3) team application, and (4) individual and team performance evaluation. During the individual preparation phase, team members are introduced to the major process of the module through a guided reading and activity exercise. This is followed by the team learning experience within the group session, which is an intensive training experience consisting of content presentation, written and oral exercises, and/or simulation activities. During the next phase, team application, group members test their knowledge of and capability to perform the major process in a real problem situation. Each module concludes with the performance evaluation, which provides the individual or all team members together an opportunity to evaluate his/their performance in the process module and to relate the process to the overall EIC role.

Inherent in this instructional approach is a point-of-view about how learning takes place most effectively. Learning is an active effort, sustained by full awareness of the learning goals and their personal worth in some present or future time. For securing and sustaining interest and, hence, effort, this instructional system provides a variety of interactive exercises, simulations, and role-playing activities to be undertaken by the team.

4. Levels of Performance. Grading is suggested for this instructional program by the disseminating agent--University of California, Berkeley, Extension. The grading system will be confined to three levels--A, B, and "failure to complete." The latter will have to be assigned to team members who do not complete the modules within the prescribed time frame of ten to twelve weeks. The A or B grade decision will be made by the Far West Laboratory coordinating staff based upon objective evaluation of team member's performance of specific assignments within the various modules. Assignments for which grades will be given are indicated in the Learning Team Training Manual by a dollar sign ($)--indicating that the trainee can "cash-in his chips" here.

C. Organization of the Learning Environment

An awareness of the educational environment as a source of information and assistance in fulfilling the demands of the Learning Team form and its elements is essential. By increasing such awareness and by giving thought to seemingly unrelated data sources, the potential impact of the training can be increased. Look to the unusual, the unrelated to find solutions to problems you encounter as you progress through the training.

As a team, such a challenge is far from unrealistic. With three to five individuals, each with varying backgrounds, the sharing of experiences and individual expertise can greatly enhance both the learning experience and the learning environment. Brainstorming of group-related problems will be its own reward as the training proceeds. The pooling of resources is central to the team concept; it greatly increases the potential learning experience for each team member.

Early attention to "getting organized" will also help make the Learning Team a successful experience. A properly organized learning environment is essential and must be arranged before the actual individual and group activities begin. The following organizational considerations should therefore be addressed:

1. The Information Center. The Educational Information Center is a focal point of this training system. As such, accessibility to a center is necessary in order to optimize learning. Knowledge of the center's operation and its goals and objectives will assist team members in putting various aspects of the training into the proper prospective.

In order to fulfill this training need in the most efficient manner, your Learning Team will be coordinated through a local information center. Certain elements of the training can then take place within the center. The Learning Team site coordinator--an individual within the center--will provide an initial contact point for the team and will help to respond to any questions arising from your group session discussions.

2. Liaison Between Team and Far West Laboratory Staff. One individual within your Learning Team should be appointed to act as the liaison between your team and the Far West Laboratory for Educational Research and Development (FWL) coordinating staff. In some instances, as mentioned above, a first-hand contact will be available through the local information center site coordinator; however, some teams may have to depend entirely upon communication with the FWL staff for answers to questions pertaining to the training and for resolution of other unforeseen problems which may arise. In either case, your team's liaison will be the conveyor of questions and answers pertinent to the training. In addition, he will be responsible for seeing that your homework and test exercises are mailed promptly to the FWL staff and that you possess the necessary training materials for each group session.

3. Meeting Arrangements. The first team meeting should be held at the center for the purposes of viewing the introductory slide-tape presentation and completing the introductory training module.

Decisions concerning meeting time and place for the rest of your group sessions will be the team's responsibility. The Learning Team form can be completed within ten weeks or less; however, various self-pacing, goal-setting, and time constraints may be operating on your team members. Such questions should be addressed during the initial sessions of your Learning Team so that you can arrange to complete the training within the maximum time of twelve weeks.

4. Mailing of Completed Materials. As each training module is completed, exercises are to be forwarded to the FWL staff for review. Your training materials themselves will be mailed in two installments. The first installment will include the individual and team materials you need to complete the first four sessions, that is, through the Negotiation Module. The second installment will include all individual and team materials for the remaining sessions of the training.

D. Biographical Information

Before actually beginning work on the Learning Team form, you should complete the Biographical Information sheet and return it to the FWL staff. Be as detailed as possible in filling out this data sheet. All such information will be regarded as confidential; it is, however, essential in helping the FWL staff to evaluate the Learning Team's effectiveness as an alternative form for the instructional system, The Educational Information Consultant: Skills in Disseminating Educational Information.

E. Use of the Training Manual

Your Training Manual is divided into nine sections: the first seven correspond to the seven instructional modules; the eighth is for storage of documents for your "Paper Trail"; and the ninth contains A Guide to Educational Resources, which you will be using as a reference throughout your learning activities.

The materials in each instructional module section are organized for your use in completing both individual and group activities. Begin each module by reading the Individual Activity Guide. It indicates the materials you need to review before the team session and also provides background information related to both individual and group activities you will be undertaking. The materials for your individual activity are provided after this Guide.

When you meet for the group session, review the Team Activity Guide. [Your team liaison should check this Guide before the session so that he/she can arrange for any equipment you will need.] The Team Activity Guide indicates the amount of time required to complete the session, the written materials in the Training Manual you will use, and which, if any, audiovisual or supplementary materials are needed.

Each Team Session, as indicated in the Guide, consists of a series of training "elements." The steps in each element should be completed in the sequence suggested. The elements themselves should also be completed in sequence, since each builds on what has gone before. Observing this pattern will help you and your team members to achieve the major process objectives, which are listed on the dividers for each instructional module.

BIOGRAPHICAL INFORMATION

For our records and for future correspondence concerning our training, please complete the following items:

Name _____

Age _____ Male _____ Female _____

Address _____
No. Street Apt. No.

_____
City State Zip Code

What is your present position/job title? _____

What is your highest academic degree? _____

In what major field? _____

To what extent have you been involved in disseminating educational information?

_____

_____

What previous training which specifically relates to information science, librarianship, or to dissemination of educational research have you had?

_____

_____

What is your major purpose for taking this course? _____

_____

_____

What kinds of skills, knowledge, etc. do you hope to gain from this training?

_____

_____

SCHEDULE OF LEARNING TEAM ACTIVITIES

Week	Session No.	Module
APRIL		
3-7	1	INTRODUCTION
10-14	2	SIMULATION
17-21	3	NEGOTIATION (PART I)
24-28	4	NEGOTIATION (PART II)
MAY		
1-5	5	RETRIEVAL (PART I)
8-12	6	RETRIEVAL (PART II)
15-19	7	TRANSFORMATION
22-26	8	COMMUNICATION
MAY 29-JUNE 2	9	EVALUATION
JUNE		
5-9	10	SUMMARY AND REVIEW (OPEN)

LEARNING TEAM AUDIOVISUAL MATERIAL AND EQUIPMENT REQUIREMENTS

Team Session No.	Module	Equipment	Audiovisual Material
1	Introduction	Carousel Slide Projector Cassette Recorder	Carousel Slide Tray: "The Emerging Role of the Educational Information Consultant" Cassette A (Side 1): "The Emerging Role of the Educational Information Consultant"
2	Simulation	Cassette Recorder	Cassette B (Side 1): "Simulation-Negotiation/ Communication"
3	Negotiation I	Cassette Recorder	Cassette B (Side 2): "A Negotiation Interview"
4	Negotiation II	None	None
5	Retrieval I	None	None
6	Retrieval II	Carousel Slide Projector Cassette Recorder	Carousel Slide Tray: "Introducing ERIC/ ChESS" and "ERIC DIALOG" Cassette C (Side 1): "Introducing ERIC/ ChESS" and "ERIC DIALOG"
7	Transformation	None	None
8	Communication	None	None
9	Evaluation	None	None
10	Summary and Review	None	None

MODULE: INTRODUCTION TO THE ROLE OF THE EDUCATIONAL INFORMATION CONSULTANT

Definition

The role of Educational Information Consultant (EIC) is emerging in response to the need for information dissemination services in education. The EIC's role is to receive, process, and fulfill client requests for information needed to resolve specific curricular, instructional, and administrative problems. Various aspects of the EIC service have, in the past, been shared by a variety of professionals. It is becoming evident now, however, that the flow of information on which educational renewal, innovation, and practice is based must be better organized and given greater financial support. Training of personnel who can fill the EIC role must be provided to support this flow.

Objectives

The following instructional objectives specify intended outcomes for this introductory module. When you complete it, you should be able to:

1. Name the five processes of the EIC role and describe the basic function of each.

2. Explain how the EIC service can be integrated into the existing educational system in terms of people and functions.

3. Express interest in the EIC role as a productive approach to improving school operations.

4. Show a positive attitude toward the potential of the EIC role, at least to the point of being willing to complete a training course for performing the role.

INDIVIDUAL ACTIVITY GUIDE

Preparation for Team Session No. 1

Materials Needed:

The Regional Information Service by Sanford Glovinsky
A Statement of Need--The Knowledge Linker in Education
Knowledge Linkers and the Flow of Educational Information
by Richard S. Farr
Information Networks--An Overview

Preparation

The role of the Educational Information Consultant (EIC) is emerging in response to the need for information dissemination services in education. The EIC's role is to receive, process, and fulfill client requests for information needed to resolve specific curricular, instructional, and administrative problems. Various aspects of the EIC service have, in the past, been shared by a variety of professionals. It is becoming evident now, however, that the flow of information on which educational renewal, innovation, and practice is based must be better organized and given greater financial support. Training of personnel who can fill the EIC role must be provided to support this flow. The slide-tape presentation you will see during Team Session No. 1 will provide a visual overview of the role of the EIC, the need for such a role in education, and the functions of such a linkage agent within the educational system.

INDIVIDUAL ACTIVITY Read and take notes on the following:

The Regional Information Service
A Statement of Need--The Knowledge Linker in Education
Knowledge Linkers and the Flow of Educational Information

As mentioned in the readings, there is an emerging need for a linkage agent--a person capable of standing between the research community and the educator, a person whose prime responsibility is to make research and development information available to the educator. Such a person has yet to appear in the full sense of the EIC role proposed here. There are existing roles of research librarians, information consultants, and other such intermediaries. The EIC role, as conceptualized here, however, is just beginning to emerge. As educators begin to realize the value of the availability of research information to the future of education, the EIC role will assume an ever increasing importance.

Information networks designed to serve the teacher and administrator are

(continued)

INDIVIDUAL ACTIVITY GUIDE

developing in a number of states. The National Center for Educational Communication, under the auspices of the U. S. Office of Education, has set the development of such networks as a top priority item. The personnel who will serve in these networks will be knowledge linkers--bringing information about new products and practices resulting from educational research and development to the educators who can implement and use them. Training these personnel to serve effectively as linkage agents within the networks is of primary importance.

The effective dissemination of educational information is a complex task involving tremendous effort in developing networks and in effecting value change within institutions which historically have resisted such change. An effective agent, capable of relating to both the research community and the schools, is a necessity if the networks are to become an integral part of the educational community. Knowledge linkers and networks go hand-in-hand; without one, you do not have the other.

INDIVIDUAL ACTIVITY Read: *Information Networks--An Overview.*

The five processes of the EIC linker role--negotiation, retrieval, transformation, communication, and evaluation--further identified in the slide-tape presentation you will see, can be defined briefly as follows:

Negotiation:	To identify, analyze, assess, and define specifically the problem and attendant information need(s) of a client.
Retrieval:	To develop a search strategy and locate, identify, and secure R and D information pertinent to the client's problem and request.
Transformation:	To screen, analyze and/or synthesize, and organize the results of the search in a form appropriate for delivery to the client.
Communication:	To display and convey the results of the search to the client in a style appropriate for his use in finding a solution(s) to the problem.
Evaluation:	To assess the performance of the major EIC processes and overall role and the operational effectiveness of the setting within the linkage system; reformulate based on evaluation and follow-up evidence; and make adjustments in processes and functions.

Each of these processes will be the focus of one of the subsequent instructional modules.

THE REGIONAL INFORMATION SERVICE

by Sanford Glovinsky

The proposal which was funded, like most of the ESEA Title III grants in the beginning, was the result of a needs study done in the county. The first year's study grant allowed for a survey of everyone in the community who had some stake in the improvement of education. So that meant that virtually every level of school, social agency, and community services people had to be contacted and, if possible, be part of the planning activity. Public and private sectors, minorities, militants, conservatives, haves and have-nots were to all give their input about what was needed to improve the educational lot of the children in the area.

Our county was large by most standards. There were 42 public school districts, a large parochial element, 700,000 students, 28,000 educators, and 600 square miles of area. There were small rural school districts and large metropolitan ones. There were, most of all, the problems currently facing education so that the needs that came to the top of the list could pretty well have been predicted. Self-concept, the learning process, understanding the individual, motivation, and dealing effectively with problem students were the areas of concern. We had to bring together a staff that could innovate for change and improvement.

Our organization was to be a Center made up of several semi-autonomous components, each supportive of the others but, at the same time, meeting rather specific goals and objectives outlined in the proposal. I joined the staff two weeks after the new funding cycle began and was the second active member of what was to grow into a group of 12 professionals and 13 support staff. A month later, I was asked to take over the Information Component.

The task was seen mostly as an administrative one, organizing a regional information service that used innovative techniques and provided much needed information to the educational decision-makers in the area. But it soon became evident that administration was only part of the challenge. What was needed was a different philosophy about how to get information from where it was stored or being generated to the people in the schools who needed it. There is no scarcity of educational material. The problem really is that there is too much information and most of it is never used.

There are all kinds of reasons why, in a field like education, one would think that those involved would be highly skilled in "handling information," but the fact is that very little was being done. Most people are too busy or too tired to struggle with the tedium connected with searching and digging out information. Most people who come up through our educational system have learned to despise "reasearching" by the time they have reached the seventh grade. It's about that time that they learn they really don't need much information "to get by." And so they begin "just getting by" and they do that for the rest of their lives, even after they become educators.

What I hoped to do was to try to make it easy, comfortable, and maybe even fun for any professional in the region to get information when it was needed. I wanted to be able to put "some information" in their hands when the request came in and only as a last resort to make referrals to other agencies for additional or supportive materials. Ours was to be "a one-stop" information service of the kind that had been advocated by some people in the Office of Education in Washington. It would fill the void between what efforts were being made at the state and national levels.

The model that began to evolve in my mind was that a regional information service had to be an umbrella-like (See figure on following page.) function for both the other components of the Center and for the large clientele that composed "the region." The county boundaries and the service area defined in the proposal attempted to delineate who should be served. But requests started coming from well beyond the immediate county area almost the first day. And so deciding on "what our region really was and which people we could hope to service" became very complex and some arbitrary decisions had to be made even though "persons to be served" was supposedly spelled out in the project proposal.

We had to establish good working relationships in every direction. I wanted to be part of an information network that I felt was taking shape out of an amorphous need to do something with all the available materials so that educators in schools could do a better job for their students. We decided to focus on serving professional educators, primarily in our county but that we would try to answer requests for out of the county but that we would try to answer requests for out of the county as long as we could handle the work load. This meant that we eliminated direct service to parents and students, because we just didn't feel that we had the resources to do otherwise. Also, we weren't going to be a traditional library-type operation, since we didn't have the time or resources to bring together that kind of a data base.

We began building a data base that was to include a small hardcover collection, mostly for staff use, a journal collection of 150 titles, a file on projects and people, selected local and national newspapers, a textbook collection, some audiovisual items, a fair collection of kit materials and teaching aids, the complete ERIC system, Dissertation Abstracts back to 1956, a test file, all the standard library reference tools, a comprehensive newsletter collection, and a very extensive collection of reprints, reports, monographs, and clippings which came to be known as our "fugitive file." Later on, I began trying to get materials from the local school districts, i.e., contracts, report cards, handbooks, P. R. publications, etc., for comparison purposes. The idea was to start bringing together all the kinds of resources we could think of that the educators we were trying to serve might ask for--except for "content materials" which we felt we had to avoid because space and storage were a major problem right from the start. Then when more and more people began to make "on-site" use of our materials (which we encouraged), we found that oftentimes there was no place for them to sit down to work.

The "Rain" of Educational Information

The services we offered were of two types. I felt that we had to respond to requests for information as a top priority, but perhaps just as important or maybe even more important was to provide services which would stimulate interest in the use of "new methods and innovations." This latter task led to what we called a current awareness program. Between the two types of services we felt that we could meet the informational needs of our Center. We planned to use as many forms of communicating as proved feasible. Requests came primarily by phone, although the mail was heavy too. Being able to interface with the requesters on the telephone, or in person when they came, was an extremely valuable facet of our operation. It allowed us to have much greater opportunity to produce useful materials for our clients. It led to the realization that even a regional center had to be accessible to the people in its area if it was to have real impact on causing change. Being part of a Center whose other components offered consultations in inservice training, evaluation, and curriculum innovations was an equally important organizational arrangement, because we could help those for whom information had been obtained in their efforts at its implementation. An information service should not stand alone but rather should be part of a total effort to inspire improvement.

And so, in three years of operation, over 6,000 individual "questions" were received. They ranged all the way from looking up the name of an author or the price of his book to doing sophisticated literature searches. We tried to give fast turnaround time and at first were holding to a four-day schedule. But when the number of requests grew and the questions became more complex, we felt that for some responses a two-week turnaround was acceptable. Any length of time longer that that, we felt, was too long.

As part of the current awareness program, we generated about 40 bibliographies on "hot" topics, ran a recorded telephone message, offered a reprint service, disseminated packets of materials selected because of their currency, distributed U.S.O.E. materials like PREP, and gave dozens of orientations about our Center and its services.

We felt that we had a successful operation and the responses that we received from our various user surveys seemed to pretty much substantiate our beliefs. There are a lot of other techinques that I'd like to try and some that we used probably should be modified or changed to completely new formats--but I think the basic philosophy is sound.

A STATEMENT OF NEED--THE KNOWLEDGE LINKER IN EDUCATION*

The field of education today is faced with a serious dilemma: how to harness the output of the knowledge explosion so that this knowledge can be utilized to solve the demands being placed upon the education system. In 1964, Richard Carlson cited a weak knowledge base as one of the main problems in education.[1] Today, there is not a lack of available knowledge as exemplified by the ERIC information system. But there is a lack of utilization of educational research and successful practices which does tend to support Carlson's concept of a weak knowledge base.

The main reason for the lack of knowledge utilization in education is the gap which exists in the system of knowledge transfer. This proposal is premised on the need in elementary and secondary education for an institutionalized knowledge linker role which should be independent of the research and practice worlds.

PROBLEM

The process of knowledge transfer within the knowledge utilization system is inadequate due to this anonymity between developer and practitioner. Since the developer's function is to supply the practitioner with a working model for solving the consumer's problems, it is necessary to help the developer and the practitioner to be linked together so that communication can occur more directly.

The federal government has attempted to alleviate this lack of contact by instituting the R&D Centers. However, these have not solved the problem as noted by Harriet Feinberg in an evaluation of the R&D Center at Harvard.

> In the foreground, overshadowing any other problems is a large and obvious gap between the University (Harvard) and the participating school systems. Harvard Graduate School of Education appears withdrawn, highly research oriented as opposed to service oriented, and unresponsive to the everyday needs and problems of the school systems. The conventional research-development-dissemination model suggested by the Office of Education's description of the R&D Centers, whereby the results of basic research are transmitted into curriculum development, and eventually disseminated to school systems, is seriously questioned if not rejected.[2]

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*Edited and condensed from a proposal submitted to the U. S. Office of Education by the staff of the Merrimack Education Center, 101 Mill Road, Chelmsford, Massachusetts, under the direction of Richard J. Lavin, Ed.D., 1971.

Attempts have been made to make research available to practitioners via the printed word, but most have failed as noted in a study by Lazarsfield and Sieber in which they found that only a small percentage of teachers read publications which contain research results.[3] The federal government has attempted to disseminate new knowledge to school personnel through the ERIC information system. However this program has not been utilized by educators as noted by Guba and Horvat.[4]

The result of this breakdown in the communication process between developers and practitioners has resulted in the lack of research utilization by school personnel as described by Carlson earlier in this paper and by Lazarsfield and Sieber in the following comment:

> Many teachers have little or no knowledge of the research that has been done in their field and are unaware that there are practical findings that could be applied to everyday work.[5]

The lack of utilization is compounded by the fact that even when a practitioner does know about research or has used it, the knowledge is not transferred even within the same school system as Coombs has observed:

> Even when research is undertaken in the setting of the local school, often the results are not transported even to neighboring systems.[6]

> School systems are seriously deficient in transmission processes for new and improved ways of working. Hundreds of successful classroom innovations are born to bloom unseen. Some get into journal articles, conversational reports, or books - but many are unknown even to other teachers in the same building.[7]

The problem is evident: how can we increase the utilization of research based knowledge by school personnel? This does not infer a forcing of research upon the practitioners but instead provides them with research results and successful practices which will enable them to evaluate their present situation and to determine if these new findings can help them to improve the learning of the consumers. The problem can be divided into subparts as follows:

1. Reduce the anonymity between developer and practitioner.
2. Target information to specific practitioner needs.
3. Increase the communication of research findings and successful practices between local practitioners.

Attempts to solve the above problem have not been successful in the past as noted earlier in this paper. New mechanisms or agencies are needed to bridge this gap in knowledge utilization.

The knowledge linker must assume an active role between the developer and the practitioner. He must go to the practitioner and discover what types of information are required. Then he must turn to the resource systems, which could be developers or other practitioners, and determine what information is available to meet these needs. Many times the information is not available in which case the linker can serve as an intermediary in a two step feedback channel to provide the developer with guidance for further research work.

There are three fundamental requirements that the linker must possess. These have been inferred in the writings of Havelock[8] and Lippitt[9] who are both located at the Center for Research on the Utilization of Scientific Knowledge (CRUSK) at the University of Michigan. First, the linker must be able to help the practitioner assess his needs. Before the practitioner can use information he must know specifically what his problems are. Second, he must have a knowledge of the resources which are available to solve the educational practitioner's problems. This will include not only the human resources of developers, consultants, and other practitioners but also printed resources in the form of research, successful practices, training programs, etc. Third, the linker must have access to these resources so that they can be made available to the practitioner. There may be nothing more frustrating to the practitioner than to know what his needs are, know what type of resources he needs, and then not be able to get them. These three requirements appear quite simple but as Havelock points out if the practitioner was able to perform all three of these activities himself he would not need a linker.[10]

There are several difficulties inherent in performing the knowledge linker role. These can be classified as follows:

1. Overload
2. Marginality

Overload can best be described as too much information to handle, too many people to get it from, too much processing to be done before it is useful, and too many people to give it to.[11] Marginality refers to the in-betweener position of the linker and the lack of precedence for the new role of "knowledge linker".

These two problems make it nearly impossible for an individual to fulfill the linker role. Farr states the following:

> What is obvious, however, is that educational linking cannot possibly be done by individuals alone but requires the resources and legitimacy of a rather comprehensive organization.[12]

The institutionalization of the linker role is not a panacea; however, it does provide the linkers within the institution with the following:

1. economic security due to the permanence of the institution
2. identity which reduces the marginality problem and may give the individual a feeling of being worthwhile
3. coordination so that the individual can specialize on only a few tasks but yet allow the multiple functions of the linking role to be accomplished, i.e., reduces the overload problem.

Farr argues for an impartial middleman since he believes the developer and practitioner are hindered in performing their roles as developers and as teachers and also decrease their effectiveness as linkers if they attempt to fill the role. The impartial no axe-to-grind middleman is able to maintain a certain trustworthiness and credibility attainable by no one else.[13] Havelock sums it up as follows:

> This linking institution could be based in a university or a school system but neither of these alternatives is entirely satisfactory. An independent base not identified with either the research world or the practice world is probably preferable. In any case, the institution will be expensive to operate if it is to be an effective linker and will, therefore, require federal support.[14]

The training required to prepare linking agents must include conceptual frameworks and specific skills which are aimed at satisfying the requirements of a linking agent as mentioned earlier in this paper. First, the individual must understand the framework of the knowledge utilization system and the types of processes that occur. The linker must also realize the inherent problems involved with the linker role and realize the need for a coordination of linker efforts to accomplish the task of bringing together practitioners and resources to meet the needs of the consumer. The individual must also develop diagnostic and facilitating skills to assist the practitioner in assessing his needs. Such skills would include how to ask the right questions and how to collect, process, and interpret data.

The linker must also know what types of resources are available and how to link these to the practitioner. To access such information he should understand knowledge storage and retrieval methods as well as where human resources are located (see Lippitt for a more detailed description of possible curriculum[15]).

Havelock suggests six types of tools which the agent should possess:

1. Linking strategies or project designs
2. Handbook of new practices, innovations, and usable research knowledge
3. Handbook on linking problems and solutions
4. Guide to the retrieval of knowledge
5. Simple instruments to measure the success of his dissemination and utilization efforts
6. Client self-diagnostic tools[16]

The knowledge linker organization staffed with these trained and equipped personnel will be able to work with a large number of practitioners from different school systems. In assisting the practitioners to assess their needs, a number of common needs will be recognized by the linkers. When the practitioners are made aware of this commonality, they may wish to form inter school system teams to develop programs for fulfilling the needs. The independent linking organization will be in an excellent position to facilitate the exchange of resources not only between developers and practitioners but also between practitioners. By working on a cooperative basis the school systems will also be able to solve the problems more economically than if they were working separately due to the sharing of resources in the designing and operation of programs. This cooperative effort to meet common needs between school systems is possible as shown by some of the exemplary Title III Centers in operation.

As noted earlier, an important function of the knowledge linkers will be the targeting of selective information to the practitioners which will require an active linker role. The key to the selective dissemination of information (SDI) is the matching of individual practitioner needs with specific information to meet these needs. The linker must continually search all available information sources in order to provide this match. This can be greatly facilitated by the use of computers but is also possible on a manual basis even though it is more time consuming. A regular program must be instituted to (1) monitor practitioner needs, (2) send the appropriate information to the practitioner, and (3) receive feedback as to the usefulness of the information in meeting the needs. The feedback from the practitioner is essential because it enables the linker to realize not only whether the practitioner has correctly identified his problem but also how the needs are changing.

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KNOWLEDGE LINKERS AND THE FLOW OF EDUCATIONAL INFORMATION

By Richard S. Farr
Research Assistant
Institute for Communication Research
Stanford University

An Occasional Paper from ERIC at Stanford

September 1969

FOREWORD

The ERIC Clearinghouse at Stanford, in its first eighteen months of operation, may have provided a partial model for Richard Farr's paper. It seems more certain, however, that the paper we commissioned will have an effect on future clearinghouse activities.

By making the paper available outside the clearinghouse we hope to aid people involved in the growing number of similar operations, but we also count on receiving comment from readers which will allow us to issue an improved version in the future. In that sense, this is definitely a "working paper."

This paper itself, of course, is dedicated to playing a linking role, between the existing relevant research and all of us who find our roles in the educational innovation system to be challenging.

Don Coombs and William Paisley

KNOWLEDGE LINKERS AND THE FLOW OF EDUCATIONAL INFORMATION

Knowledge, to have much value, must at some time move from the minds of the individuals responsible for its existence to the minds of those responsible for its utilization. Such movement is usually referred to as the "flow of knowledge," and often there is an intermediary aiding in the movement.

Figure 1 is grossly oversimplified, but it does focus on the position, function, and role of the intermediary or "linker" in the educational system. (This use of "linker" originated with Ronald Havelock. See Havelock, 1967.) After a closer examination of the

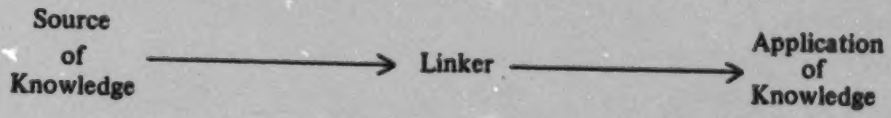

Fig. 1

The Flow of Educational Knowledge

other two elements in our chart, we shall attempt a more detailed representation of the educational knowledge flow system and the role of the linker.

Source of Educational Knowledge

Many types of individuals in many types of institutions are sources of educational knowledge. Educational research is one such source, but there are numerous others—textbooks in educational procedures and methods, so-called "think" pieces by scholars in journals, and serendipitous discoveries by inventive administrators and teachers.

Seldom, however, is the producer of a bit of knowledge responsible for inserting it in and propelling it through the "knowledge flow system." And probably this is a good thing. Acquaintance with the practical considerations involved in utilizing educational knowledge is relatively low among knowledge-producers. The most productive research is not usually conducted by the man who bears the everyday responsibilities of the teacher or administrator, nor is the best teaching done by researchers. Rarely can these two functions be carried out well by a single individual, but neither the researcher nor the teacher can do his best work in ignorance of the other. Here is where the linker comes in.

In the early stages of the diffusion of knowledge, the form of the information will hardly be appropriate for consumption by someone who wants to put it to work. You have

all seen the articles that make up the educational research journals. Compare them with the four-color, glossy instruction manual that comes with a new car or television set, or even a lawn and garden care manual. Much time, effort, and money are lavished on these commercial brochures so that they will be effective. That is not to say that educational innovations ought to be disseminated in such formats, but the contrast points up the difference between announcing knowledge and facilitating its utilization.

Users of Educational Knowledge

Our flow chart is also grossly misleading in representing the application of educational knowledge as a single element in the scheme of things. We all know that the users of educational knowledge are a broad and diverse group. They have been described as "the deep, vertical audience for educational information" (Paisley, 1969). Administrators at the federal, state, county and local levels, consultants, topic and technology specialists, teachers, parents, and even at times students themselves are all members of this extensive audience through which educational ideas and practices must filter down. Although few valid generalizations can be drawn about these people, perhaps they can be characterized fairly as having little or no appreciation for the concerns and orientation of those responsible for the creation of knowledge. Their understanding of the procedures, self-imposed rigor, and motivation of the researchers and academicians is at best limited. Here again we see where the role of the linker, in not only communicating to this deep and heterogeneous audience but also in overcoming the inherent apathy to educational research, is an essential one in maintaining the flow of information.

The obvious question is how the linker can even begin to reach the huge audience just described. He has several channels from which to choose. There are the periodicals primarily aimed at specialized audiences—administrators, teachers, audio-visual specialists and the like. There are also the mass media channels which reach the larger audience of parents, concerned citizens and students. There are conferences, conventions of special interest groups, direct mail access to these same groups via their membership lists, and direct contact by visits to the schools themselves. However, extensive studies have shown that informal, interpersonal channels of communication are by far the most effective way to reach an audience. That is, *word gets around best when people talk to each other.* It is this interpersonal network of communication, therefore, that the linker must seek to activate. The use of the media cannot be ignored, however, for it is an important element in the activation process.

Later we will look more closely at what research has to say about the functioning of this interpersonal network in the diffusion of information, but now let us mention briefly just how a linker gains access to the network. Certain individuals in the mass audience are more active than others in introducing new information into the network. In different contexts they have been given several different labels, such as influentials, early adopters and opinion leaders. But for our purposes we shall use Kurt Lewin's term "gatekeepers" (Lewin, 1947). As members of our target audience, these people can open the gate and admit new information into the audience's person-to-person communication network. As we

shall see later, these gatekeepers have certain traits that make them more accessible than other members of the audience, and this makes our jobs as linkers somewhat easier.

The Educational Linker

Having looked at what really lies behind the simplistic terminal points in our first flow chart, let us now try to portray more accurately the real picture of the educational knowledge flow system. We shall concentrate upon the structure of the audience and the relationships between the linker and the two end points. The source of educational knowledge will continue to be portrayed as simply as possible, recognizing that others have

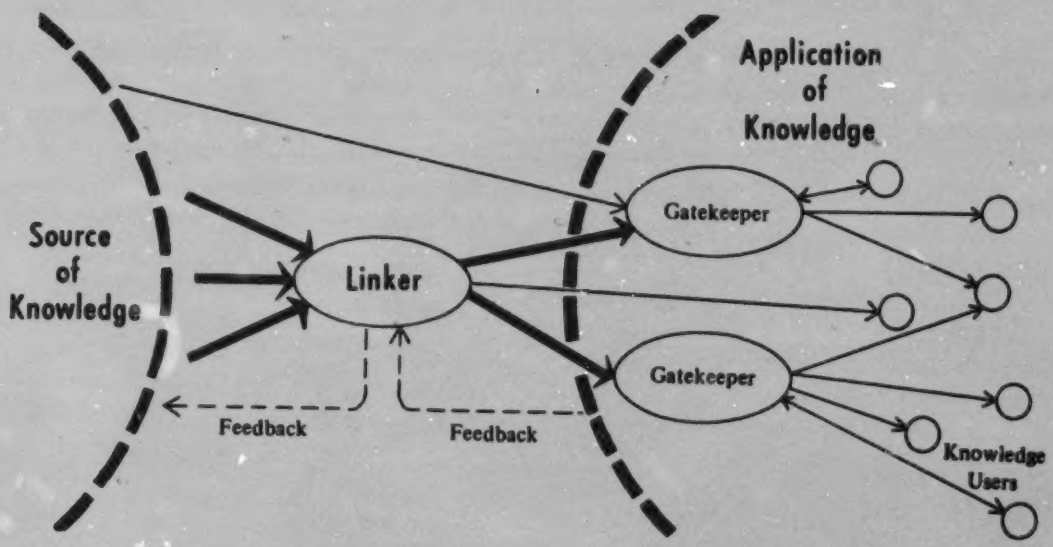

Fig. 2
The Flow of Educational Knowledge
(Expanded Diagram)

concentrated their efforts in this area (see Pellegrin, 1965) and that the focus of this paper is on the linker and how he can function effectively. For this purpose we need to concentrate on the audience with which he is concerned. Note also in our revised diagram that provision has been made for two-way communication, or feedback, between the linker and both the source and the users of knowledge. It must be recognized that effective communication seldom can be carried on over a one-way channel.

You yourself are a linker. Or at least you probably are familiar with the task and problems of a linker. What does a linker do? The answers to this question will be as varied and numerous as the individuals answering it. Witness for example some of the different labels that have been applied to individuals filling what are essentially linking roles: conveyor, packager, extension specialist, detail man, demonstrator, information retrieval

specialist, consultant, and change agent. But in the most general terms, as we tried to emphasize in Figure 1, the linker's role is a relatively clear cut one. His function is simply the gathering, processing, and distribution of educational knowledge. That is not to say that his job is an easy one; rather it is a demanding task requiring specialties that are not yet completely understood, and the position is one which has not yet been recognized for its full importance nor accorded its deserved status.

Inherent Difficulties in the Role

Havelock has identified two major problems which the knowledge linker constantly faces (Havelock, 1967). He calls them *overload* and *marginality*. Overload is the great work demand made upon the linker in each of his functions. Havelock identifies three types of overload problems: number, complexity, and difficulty. In retrieval, the body of educational knowledge is massive, often highly technical, even inaccessible. If the scope of the information gathering has not stopped the linker, then he faces the job of processing that which he has retrieved. Here again there is a wealth of material to be sorted through, and a translation from the highly technical jargon of the researcher to language understandable to the practitioner. In dissemination the audience is huge, its demands are diverse and complex, and—finally—it is just plain hard to reach.

Marginality presents a completely different set of difficulties. It refers to the linker's position as a go-between. He is not an initial source of knowledge, nor is he a member of the client community who apply the knowledge to the ongoing educational process. There are partial exceptions to this type of uncommitted middleman; there are those who belong to one camp and try to carry on direct communication with the other. Their situation usually hinders their functioning as researchers or teachers and really doesn't increase their effectiveness as linkers. While marginality is inherent in the role of the linker, it can be construed as an advantage as well as a disadvantage. The impartial, "no-axe-to-grind" middleman is able to maintain a certain trustworthiness and credibility attainable by no one else.

Marginality is hopefully just a temporary problem for linkers. Anyone who assumes a new role in an institution must fight an uphill battle against suspicion among other members of that institution who have not yet accepted the need for the new role. As time passes, however, the function of the role, its usefulness and its legitimacy become established, and regardless of its marginality, some of the problems that went hand-in-hand with getting the role established disappear.

To Havelock's two problems I would add only one other element which seems implicit throughout his discussion. The entire concept of a linker suffers from a *lack of recognized precedence* for such a person. Information storage, retrieval and exchange as a science and legitimate academic pursuit is only a recent development. Librarians, reference librarians especially, have never been recognized for what they truly are, linkers between the vast storehouse of knowledge on their shelves and the community at large. However, the efforts of librarians represent only a small portion of the role envisioned for linkers in the educational knowledge flow system. Libraries collect information, but really go little further. No collating, packaging, or processing of information takes place. And although it is

unfair to say that libraries never disseminate information, it is true that any information exchange that occurs is information *sought* rather than information *given*. Seldom do libraries attempt to reach out to members of the community and say "Here is some material that we think might be useful to you." Rather they rely on audience initiative to start any information exchange. That situation is a far cry from what is envisioned for educational linkers.

Numerous disciplines offer suggestions as to how this more dynamic type of linker might best operate. The new information sciences, psychology, rural sociology, communication research, marketing and others all bear in one way or another on the problems facing the linker. The lack of precedent for the linker really means that no one has ever attempted to pull together the relevant materials from all these areas and show their applicability. No schools offer training in how to be a linker, but an analogous precedent to what is envisioned in the educational knowledge flow system is the Agricultural Extension Service in the Department of Agriculture. The role of the agricultural county agent is well known, but even here the techniques are not wholly transferable. What is obvious, however, is that educational linking cannot possibly be done by individuals alone, but requires the resources and legitimacy of a rather comprehensive organization.

Advantages of Permanent Linking Institutions

An institution constituted solely to link sources of educational knowledge with potential users is a giant step toward the ideal type of educational knowledge flow system we envision. First of all, institutionalizing this role helps to overcome some of the problems outlined above. The overworked linker becomes the overworked linking institution--not a perfect solution, but perhaps an improvement. The lonely, unrecognized linker besieged by Havelock's problem of marginality now is joined by a group of colleagues in a marginal, unrecognized linking institution. Again, there is an improvement, for individual mental health anyway. Most of you recognize the problems cited above, and as members of permanent linking institutions you know that simply banding together is not a panacea. However, establishing ongoing projects designed to serve as links between the sources and users of educational knowledge does have several advantages.

Havelock talks about the *security* an institution offers the individual (Havelock, 1967). This is primarily an economic consideration and results from the permanence of the institution. The individual knows where he will be working tomorrow and is assured of a position in an identifiable organization rather than feeling that he is free floating in ambiguous nothingness between the resource system and client system.

Another advantage is the *identity* an institution offers the individual. Picking up where security leaves off, the legitimizing function of a permanent institution not only makes the individual feel he is doing something important and worthwhile, but it also compels others to begin to think the same way. Here marginality begins to diminish because although the linker is still neither fish nor fowl as far as the traditional resource and application systems of education are concerned, he is working for a duly constituted, functioning organization which, it will be assumed, must have a worthwhile purpose for existing.

Finally, a linking institution permits the *coordination* of the multiple functions required of a link in the flow of knowledge chain. This would seem a good time to examine more closely exactly what the functions of such a link must be. What we earlier labeled the collection, processing, and dissemination of educational knowledge, Havelock refers to as the input, throughput, and output of a permanent linking institution (Havelock, 1967). The facility to coordinate the separate activities in an institution is certainly a positive step toward reducing the tremendous workload borne by an individual linker as discussed earlier. And more importantly, perhaps, it permits the *specialization* by individuals in one area or another of the entire linking task. Input is primarily a librarian's job, collecting and cataloguing, although the task requires knowledge of audience desires and of the capabilities of the resource system to answer them. For the remaining two functions, it is more difficult to cite analogous operations in other areas. The output or dissemination of information obviously requires extensive familiarity with the audience. Since we are primarily concerned with communication via the print channel–papers, journals, direct mail, etc.–the activities of the county agent of the Agricultural Extension Service are not very relevant, and perhaps the jobs of membership secretaries or newsletter editors in large special-interest organizations are more parallel. The dissemination of knowledge requires knowing about the process of adoption of a new idea or product, as well as a never-ending search for potential members of the target audience and the gatekeepers therein.

The throughput or processing of education information is perhaps the most challenging of the three functions, if for no other reason than that it is the one about which we know the least. The information processor must be familiar with the desires, personalities, and day-to-day considerations of his intended audience. He must be familiar with the resource system of educational knowledge so as to know where to turn in pulling together the necessary elements for a comprehensive treatment of a topic. He also must know the principles of attitude change, packaging, consumer motivation, and all of the various factors that go together in making a message maximally efficient in reaching and having the intended effect upon its audience.

Ideal Functioning of a Linking Institution

An educational linking institution ought to:

1) anticipate or sense an area of concern among members of its target audience,
2) turn to the resource system and gather all the available information on that subject,
3) select only the most salient elements, summarizing and drawing conclusions,
4) present this exhaustive review of the literature in an easily readable and digestible form, and
5) disseminate the document effectively, reaching the most influential members of the audience which is in need of the information.

Obviously there are several subspecialties involved in this entire task, from the reference librarian through the copywriter through the layout and typography specialist to the keeper of the mailing list. A permanent linking institution established for the purpose of aiding in this type of educational information flow is a far cry from the single individual trying to carry on the same task.

An added feature of the second information flow chart is the capacity of the channels between the linker and the resource and user systems to carry two-way communication. This return communication constitutes what is commonly referred to as feedback, giving information about how initial messages are being received. A laugh from your audience after you tell a joke tells you that they "got" the joke. Similarly, reactions from the client system tell the linker what is good and what is not so good about the papers he is disseminating. However, in other than face-to-face situations, feedback is not readily forthcoming; it must be actively sought. Industries exist purely for this purpose, such as the television rating services. Herein lies a function of the linker's role that has not been discussed much. It falls to the linker to act as a catalyst to the entire flow of communication. Researchers and academicians must "publish or perish," but what they publish is of little use to potential users in its traditional format. On the other hand, teachers, administrators, and parents sporadically seek out the latest information on a topic of current interest only to encounter a frustrating and often fruitless experience. The linker not only bridges the gap between these two systems, but also can initiate appropriate communication to see that a maximally efficient interchange of information occurs.

Tomorrow's Linker

The linker must go to his audience in the user system and discover what sorts of information are desired. He then turns to the resource system and looks to see if such information is available. Oftentimes it is not. In that case the linker serves as a go-between in a sort of two-step feedback channel wherein he provides the researcher with guidance for further research efforts. This, of course, is not very much like the lonely little linker portrayed earlier, who was recognized by no one.

The linking institution of tomorrow is no longer a single individual, no longer a salesman with a commercial axe to grind, no longer a nonentity in the educational information flow system. Educational linkers are being called upon to shape the educational future of this country. Why? Because they are really the only ones in position to do it. They are central to the flow of information, in touch with those who need to know and those who can tell them. A linking institution is not to be a passive midpoint in the flow of educational knowledge, but rather an active force in sending to, and seeking from, all those others who make up the educational community.

The Stages of Adoption

You, as a linker, have seen new ideas adopted in the educational context, and probably even have participated in the process yourself. But what really goes on? Over the last thirty years, research has studied the adoption of all kinds of new ideas—from hybrid

seed corn to birth control pills to driver education courses. Evolving from this work is the generally accepted notion that individuals must pass through a series of identifiable stages leading to the adoption of a new idea. The most accepted list of these stages is presented in *Diffusion of Innovations* (Rogers, 1962). They are:

1) Awareness–the individual first learns of the existence of a new idea, but really doesn't know very much about it;
2) Interest–he feels that the idea might be relevant to him and seeks to learn more about it;
3) Evaluation–the individual applies the idea to his own particular situation and assesses its value to him;
4) Trial–he carries out more active evaluation by a "trial run" of this idea on a small scale; and
5) Adoption–finally, and only after passing through all the preceding stages, the individual adopts the idea and extends the trial to full and continued use.

The linker must realize the necessity for all adopters to pass through these stages before accepting a new idea, and the need for different types of support and encouragement for the individual in each of the stages. The exact nature of this support will be discussed shortly, but first we should consider some of the findings of the researchers involved in the diffusion of educational innovations.

Barriers to Change in the American School System

Much of the educational diffusion research was conducted by Paul Mort and his colleagues at Teachers College, Columbia University. Mort concluded that the spread of a new idea through the American school systems takes approximately fifty years, considerably longer than through other types of systems in this country (Mort, 1964). There seem to be three major reasons for the slowness of our schools to change (Carlson, 1965). The first of these is a *lack of educational change agents.* "It is suggested that support and conceptual help provided by consultants (cf. the role of the county change agent) may be essential for adequate development of awareness, interest and later adoption" (Miles, 1964, p. 652). We certainly will not argue against the position that change agents would be desirable in speeding up the process of adoption of new educational ideas in this country. Diffusion research has repeatedly shown this to be true, and limited efforts in this area by the New York State Department of Education prove its applicability to the educational setting (Carlson, 1965). However, we will address ourselves to the question of how the educational linking institution can be most effective, considering the limited person-to-person contact inherent in that role.

The second barrier to educational change is the so-called *weak knowledge base.* This obviously points toward the knowledge resource system depicted in our Fig. 2. Its weakness is that educators see it as being inapplicable, incomplete, and downright questionable. Pellegrin cites several obstacles to sound educational research, including the fact that the topics to be studied are very complex and difficult to research:

> We have here a vicious circle: a) many educators do not conceive of the scientific method as being of primary significance to their work; b) this state of mind creates an atmosphere in which low priority is given to the conduct or utilization of research; c) because of low evaluation and neglect, research continues to be a dubious enterprise; and d) because condition (c) exists, condition (a) is perpetuated (Pellegrin, 1965, pp. 71-72).

While this weak knowledge base probably is a factor in the slow diffusion of educational innovations, it is unrealistic to expect every new innovation to emerge full-blown from the resource system supported by research and ready for use. Indeed, such is never the case, even in non-educational areas.

It must be recognized that no innovation can ever be completely researched, fully developed, or all its implications realized until it has been tested in the field. As is to be expected, many school administrators are not especially happy to have themselves, their teachers, or their pupils serve as guinea pigs in such research. So while this weak knowledge base and the factors which perpetuate it continue to be a problem, there is a possible solution. In non-educational areas, innovations which are not yet fully developed or researched seem to spread more quickly. It may be that one of the reasons for the slow adoption process in the educational setting is the manner in which new ideas are presented to practicing educators. Improved linkage between sources of these ideas and the prospective users may help to remove this barrier.

Carlson's third reason for the slowness of the educational system to adopt changes is the *domestication of the public schools.* Domestication refers to the fact that our public schools do not select their students and their students do not select them. School attendance is, for the most part, legally and geographically determined. There is no competitive element in this situation as far as the school is concerned; it has a guaranteed pool of students who have no choice in whether or not they will attend. Carlson says that "the consequence of domesticating organizations, as far as organizational change is concerned, is to restrict the need for, and interest in, change because the environment of domesticated organizations in many important respects is more stable than it is in other types of organizations" (Carlson, 1965, p. 7). This is true, but linkers must keep in mind that a competitive situation is nothing more than a state of mind. We can almost assume that there is an innate pursuit of excellence in most school personnel which can be exploited as we seek to further the diffusion of innovations through the educational system. That is not to say competition per se is a good thing among our schools, especially when it develops into a wasteful and dysfunctional rivalry causing inconsidered adoption of innovations simply for the sake of adopting. But articles reaching an administrator which tell of new practices recently instituted by school districts of comparable size and means to his own should kindle a spark of competitiveness and move him from awareness to the interest and evaluation stages of adoption.

Channels of Communication in the Adoption Process

As linkers, we return our attention to the deep, vertical audience of educational

information and consider the channels of communication to and through it during the adoption process. Nearly three decades ago researchers made the serendipitous discovery that ideas do not flow directly from the mass media to the mass audience, but from the media to selected individuals in the audience and then on through the remainder via interpersonal channels of communication (Lazarsfeld *et al.*, 1944).

We should learn a little about these select individuals in the audience who provide access to mass media messages, and then we can turn our attention to the differing use of the media in the different stages of adoption. Gatekeepers permit messages from the mass media to enter the interpersonal channels, the discussions of small groups, in the mass audience. These individuals are the obvious targets of our messages about new ideas in education, not only because of the access they provide, but also because research has shown that they exert a disproportionate amount of influence in the adoption of new ideas.

But how do we locate these gatekeepers in our target audience? Three research techniques have been used to accomplish this task. Gatekeepers have been asked to identify themselves, other members of the group have been asked to identify them, and key informants have been asked to point them out. But linkers may never have to resort to any of these methods. We already know from a large number of studies what some characteristics of gatekeepers are. Knowing these characteristics, you may be able to identify the gatekeepers in your target audience rather easily.

Gatekeepers are distinguishable from the remainder of the audience in several ways. They use the mass media and other sources of information external to their own group more frequently. This attribute works in our favor, for simply by inserting a message about a new educational idea into the mass media, we will begin to reach the gatekeepers in our intended audience. Another attribute is their "cosmopoliteness," their general orientation toward persons and topics external to their own group. They are more likely to attend conventions, be interested in new things, belong to special organizations, and have personal contact with individuals outside their own group. These characteristics which identify individuals as gatekeepers simultaneously make them more readily accessible to our messages.

Gatekeepers, in order to function as gatekeepers, maintain a high level of social participation within their group, too. Essentially, as Figure 2 shows, the gatekeeper functions very much like a second linker in the flow of information system. He actively seeks out information and then makes it available to the rest of the audience. He links the linker and the client system. The gatekeeper is also likely to be in a position of slightly higher status than those he influences. In some groups with which we deal as educational linkers, there are individuals who are gatekeepers by dint of their jobs; that is, they fill a position which carries with it a gatekeeping function.

Finally, gatekeepers are characterized by their greater innovativeness. This trait works in our favor because, as important target individuals in our audience, gatekeepers are more likely to be ready to accept the new ideas which we seek to disseminate. In sum, gatekeepers provide access to our target audience and its channels of interpersonal communication, while at the same time they are more easily accessible to us via the mass media and more likely to be receptive to the new ideas we have to present.

Differing Use of the Media Through the Stages in Adoption

Returning to the stages in the adoption process and the linker behavior appropriate to each, it appears that the four preliminary stages in adoption can be categorized as the informative stages (awareness and interest) and the evaluative stages (evaluation and trial). All four stages leading to adoption are really informative in a sense, but the information-seeking becomes increasingly specific and personalized. Information gained in the first two stages is quite generalized; it is more about the innovation itself than about its particular relevance to the individual. The third and fourth stages, evaluation and trial, are marked by very personalized information-seeking as the individual assesses the innovation's appropriateness to his own particular circumstances.

Theory and data have led researchers to conclude that the mass media are used more in the informative stages of adoption, but are forsaken for more personal and more localized sources of information in the later evaluative stages. Information-getting satisfactory for the informative stages can perhaps only be accomplished using the media—sources of information external to one's own group. However, as one moves on to evaluate the innovation, the credibility of the communicator becomes more important and the greater need for a two-way channel makes the impersonal media inappropriate.

After the individual has learned enough about the new idea to warrant further evaluation, he finds the mass media unsatisfactory because he cannot ask any questions about the idea and how it applies to him. The greater the risk involved in the adoption of an innovation, the more important the personal sources of communication become (Bauer, 1961). Linkers must keep in mind how people's needs change as they move through the pre-adoption stages. This paper is restricted to the print media, and those channels can be effective in meeting these needs. Boyd and Levy (1967, p. 103) point out that the food and drug companies try to simulate interpersonal contacts in their mass media advertising by using next-door-neighbor type actors to deliver testimonials for their products. Also, such advertising often shows the product in use, which constitutes a vicarious trial period for the audience. Hopefully the gatekeepers and early adopters will supply the necessary personal encouragement sought by later adopters, but the print channel must not be written off completely as a means of providing encouragement for the early adopters.

Know Your Audience! This dictum, basic to all communication, cannot be overstressed. There are three elements common to every situation in which communication takes place, the source, the message, and audience. The communicator has relative control over the first two, the source (himself) and the message. But the audience is beyond his immediate control.

All too often the audience is an unknown quantity in the communication formula. As Lorge puts it (in Klare and Buck, 1954): "The audience fails to understand the writer because the writer has failed to understand the audience." But it goes beyond just simply understanding. Schramm (1961) sets forth four conditions which must be met in order for successful communication to occur. The message must

1) gain the attention of the intended audience,
2) use signs understandable to this audience,

3) arouse personality needs in the audience and suggest ways in which these needs can be met, and
4) make these suggestions appropriate to the group situation the audience finds itself in when the decision is made to act.

Each of these conditions requires knowledge of the audience, of the individuals' life styles, their language skills, their personalities, and their social situations. The communicator will never achieve complete control over his audience, but sending a message to them is an attempt to gain a certain degree of control. And getting them to attend to the message requires knowledge of the audience.

As Klare and Buck put it (1954, p. 14), "It is not surprising that writers often fail to meet their potential readers, since the basis of their notions about 'the typical reader,' and about their *own* readers, is so shaky. The usual basis is hearsay, scattered opinions, or just simple guesswork." Such "simple guesswork" should not be totally discounted. Oftentimes it is perceptive and accurate. In fact, possessing such emphatic ability may be the mark of a successful writer. But linkers do not have to, and shouldn't, rely solely on "seat of the pants" intuition in trying to create messages for their audiences. There are other methods, more objective and reliable, for learning about your audience.

First, it should be recognized that the deep, vertical audience for educational information is so large and diverse that generalizations about it are close to meaningless. But linkers do not usually focus their attention upon the huge audience; nearly always they are interested in some subpopulation and often it is sufficiently homogeneous for meaningful generalizations to be drawn.

Ask Them About Themselves–

One easy technique for learning about your audience is asking them about themselves. Many educational linkers have lists of individuals interested in their activities, and mail questionnaires to such a list can seek information on sex, age, education, job function, problem areas, and degree of sophistication–all information needed by linkers seeking successful diffusion of new ideas.

Another way to learn about your audience is by attending to whatever feedback is forthcoming. The more feedback, the more information to be gained, and so it falls to the linker to encourage feedback. As discussed earlier, one of the linker's functions should be that of a catalyst to the entire information flow process. Feedback, as part of this flow, should be generated by whatever means possible. For the linker this means constant requests for audience comment, the provision of easy-to-use forms or reply cards for such comment, and the dissemination of articles and thought-provoking materials capable of sparking comment.

Just as important as generating feedback is responding to any received. The best way to positively sanction those who provide you with feedback is to attend to their comments and reply to their questions. If nothing more, a brief form letter thanking them for their interest can be sent. Not only will such attention encourage further such behavior on their part, but it will also help establish truly two-way channels of communication.

One final consideration here: All linkers have, or at least should have, some notion of what their ideal audience would be like. That is, linkers are typically vested with the responsibility of serving between the knowledge resource system and some specified subpopulation of the audience for educational information. Definition of this subpopulation often is included in a contract establishing the linking institution. You should critically assess the audience now being reached. How well does it match up with the ideal audience you are supposed to be serving?

Such analysis, of course, requires that you be familiar with your present audience. The above outlined techniques will help accomplish that. But now the test: Your present audience is not perfect. It most likely includes some members who are really not interested in your service, and omits others who would be interested. How do you go about reducing the discrepancy between the actual and the ideal audience? Such a task is not a one-time-only project; the assessment must be constant. The linker must take the initiative, seek out members of his envisioned audience, make them aware of the service he is performing, and add them to his mailing list.

What techniques are appropriate to this task? Send pamphlets and brochures to potential audience members, gleaning their names from the mailing lists of related organizations and the subscription lists of related periodicals. Buy advertisements in these same periodicals, or offer to submit a column of news and notes regarding your activities for publication. Personal appearances by staff members of your linking institution at meetings and conventions of related groups will also help to get the word out. These are just a few suggestions; the important point is for linkers to recognize their responsibility to identify and seek out the audience which needs and will make use of their services. Such a task requires knowing your "audiences," both the actual and the ideal one you ought to be reaching. This knowledge is essential to any effective linking activity.

• • •

The linker's role in the flow of educational knowledge is an emerging one which will expand in scope and be more clearly defined as it becomes better understood—better understood and appreciated by the sources of educational knowledge and by the client communities, and better understood by linkers themselves. Research and experience will soon have much to say about the optimal organization and operation of educational linking institutions. But a necessary first step for us all is an understanding of the educational knowledge flow system, the adoption process, and the linker's role therein. With this we can critically evaluate our present performance and assess our potential contribution, with an eye toward that ideal linking role we have discussed.

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INFORMATION NETWORKS--AN OVERVIEW

An information network is a dynamic extension of the historically passive library service function to include an almost unlimited combination of materials, services, and expertise in order to achieve more than any one library or information center could ever hope to achieve alone. It is dynamic in that the network extends itself into the potential user community and responds positively to the inputs received from that community.

We are, today, in the early stages of what Marshall McLuhan and others have described as an information explosion. We ourselves feel the ever increasing pace of events, the "future shock" so powerfully described by Alvin Toffler, the insecurity and uncertainty which too rapid change tends to create in us. Knowledge creates questions more frequently than answers. More research is always recommended. As a consequence, scientific and technical publications are currently doubling in number every eight to ten years and, at the same time, tending toward ever-increasing specialization. Hundreds of thousands of technical reports are published each year in the United States--there are over 35,000 technical journals alone, some 500 of which have direct relevance for the educator.

People wishing to search and retrieve from these tremendous data bases are forced to master intrinsically difficult classification systems--systems which are based primarily upon the data they contain, rather than upon the particular access needs of the users. At the same time, the need is becoming more keenly felt for more effective ways to disseminate this vast stockpile of information to those who can put it to practical use and gain benefits from the suggestions and thinking it contains.

Information networks represent a logical beginning of the tremendous organizational effort needed to disseminate the many existing and yet-to-be-developed information stockpiles. The ultimate objective of the network structure is to provide anyone, anywhere, access to any material in any library, archive, or data center through a planned, orderly, effective system. A fully effective network will not only enhance the utilization of each information center, but also minimize overlapping and redundant functions. Attendant benefits can be anticipated in better service at a substantial cost reduction.

G. S. Simpson, Jr., writing on the Scientific Information System of the year 2000 A.D. has engaged in some interesting projections of past history and present trends. Simpson sees the world of information services as vastly different in the year 2000.

By 1975, Simpson projects that an organization will have been established, under the auspices of the United Nations, to coordinate and integrate the various extant information systems. Calling it the World Scientific Information Center (WSIC), he sees it composed of comparator-translator services, master storage, and master selective dissemination divisions, as well as an administrative base which coordinates the entire system.

The sequence of events at WSIC would be activated when:

> Any group of ten or more scientists agree on a proposed research program. Using U.N. standardized communication language and equations, they prepare a succinct statement of the purposes and objectives of their program. After editing, the local print reader absorbs the content of the proposal. The print reader automatically relays the message to the governing Regional Information Center. Here, an initial and limited (single language) comparison is conducted. When relayed on to the World's Center, the master comparator matches the contents of the new proposal with other proposals from any language.
>
> If a proposal is unique. . .it is subjected to a second test. The second test. . .involves a statistical matching of the objectives of the proposal against the information already classified and integrated in the master storage division of the Center. . .
>
> When a project has been accepted by the Center, implemented, and completed by the scientists, the report describing the activity and results is also exposed to the print reader. As before, the print reader relays the report to the World Scientific Information Center via the regional center. At WSIC, it too is translated, stored and selectively disseminated in many languages. . .
>
> Under this totally automated scientific information system, there is no duplication of research. . .no scientifist can make a technological advance without his being known to all his contemporaries within three minutes. (Simpson, N.D.)

The structure of a natural communication network defined by Jordan Baruch (1968) is illustrated in Figure 1.

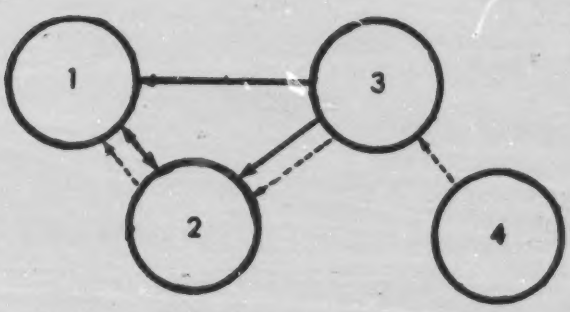


Fig. 1 The Structure of a Natural Communication Network

Simpson indicates that a number of socio-economic changes will result from the above system. Advertising will be outlawed in 1990; professional congresses and symposia elminated by 1993; the printing, publishing, and paper industries reduced in size; and the staff of the world postal system reduced.

This network is simply a pictorial expression of various desires and resources. For example, Center 1 might need books which 3 and 4 have and interesting or wanted instructional programs available at 2 and 3. Center 1, likewise, has resource books, reports, or other information needed by Center 4 and some instructional program data needed by 3. The figure does not express any connections, paths, or the actual flow of such resources. The arrows between the nodes are merely visual representations of the desired flow direction.

The physical network is a structure or combination of parts capable of moving a subset of the resources from one center to any other. A truck making the trip to transfer books, for example, would be part of the physical network. The actual configuration of any network now in operation is dictated largely by history, rather than by cost-benefit analysis, time of response required, material or medium to be carried, or other similiar system design considerations.

It will be no surprise to learn that even combinations of networks may assume any one of several structural configurations (Duggan, 1969). Such configurations specify the communication channels and patterns of message flow within it. A non-directed configuration of communication is represented if each center can communicate directly with every other center. A total of fifteen links among the six nodes is represented in Figure 2.

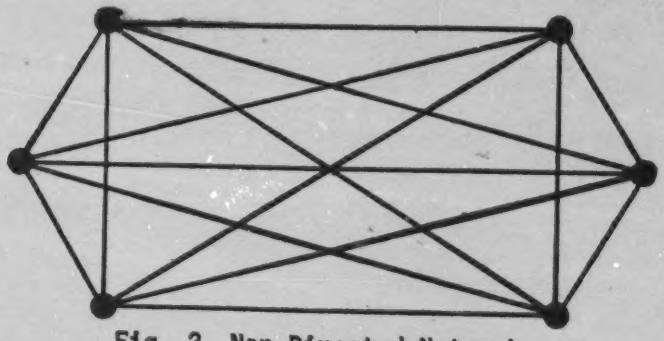


Fig. 2 Non-Directed Network

Figure 3 illustrates a different configuration--the directed configuration. Here, the six nodes are interconnected via a central switching center.

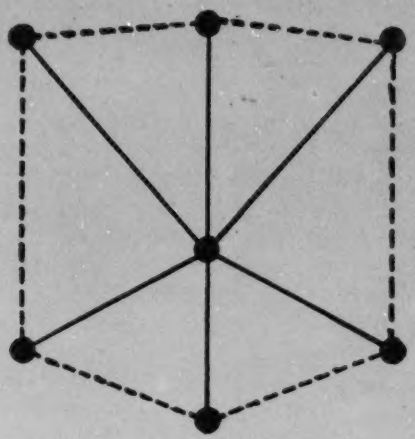


Fig. 3 Directed Network

Only six channel links are required. Should a non-directed network (as in Figure 2) desire to interface with a specialized center, such as the Library of Congress or a special bibliographic or search center, a total of twenty-one channels would be required (Figure 4); whereas, a directed network (Figure 3) could interface with a specialized center via only

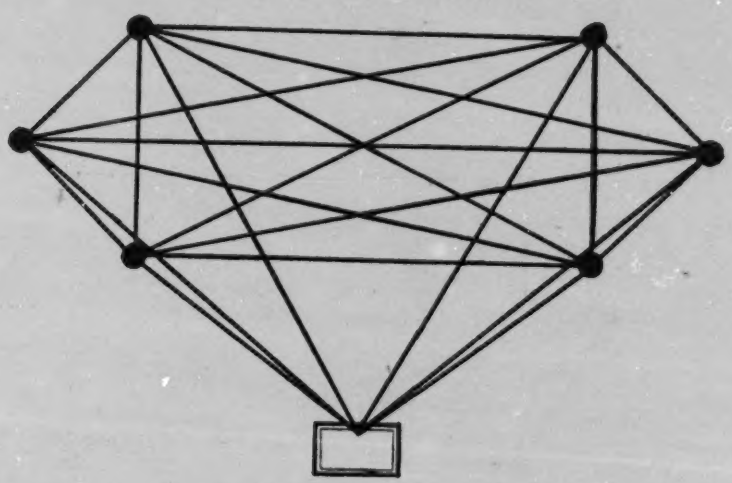


Fig. 4 Non-Directed Network
Including Specialized Center

seven channels (Figure 5). The savings in communication requirements is almost self-evident. As networks develop, then there will be a need for

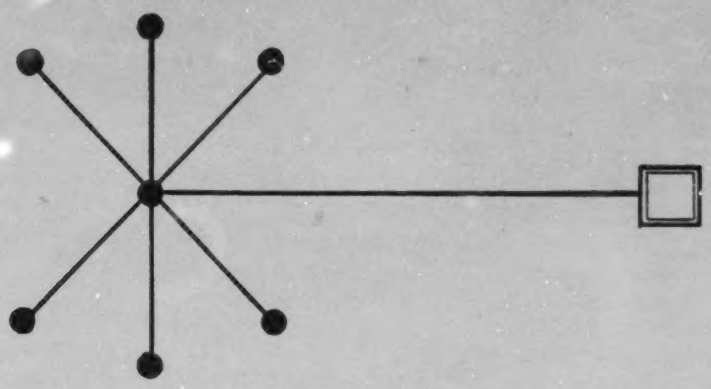


Fig. 5. Directed Network Including Specialized Center

tying together two area networks into a larger unit. The result may some day resemble something like Simpson's WSIC.

The federal government is now expressing increased interest in the development of information networks. The late President John F. Kennedy stated in the early sixties:

> "One of the major opportunities for enhancing the effectiveness of our national scientific and technical effort and the efficiency of the Government management of research and development lies in the improvement of our ability to communicate information about current research efforts and the results of past efforts. Strong science and technology is a national necessity and adequate communication is a prerequisite for strong science and technology." (Knox, 1966)

There are also sound economic reasons for federal interest and involvement: the federal government underwrites about two-thirds of the national research and development program. Dissemination is to their, as well as any, consumer's advantage, because it adds visibility to the basic research and development activities for which federal dollars have been expended.

Existing technology can now accommodate routine needs of information-handling. The hardware, in fact, presently exceeds our present ability and confidence to activate it and make its application to information-handling most useful. This is not to say that software and personnel capable of harnessing this tremendous potential are not, or will not shortly, be available. The advent of larger and more complex information networks capable of greater utility is close upon us. Some are now in

development.

The ERIC (Educational Resources Information Center) system is currently the main focus of interest for the U. S. Office of Education's (USOE) Bureau of Research and its National Center for Educational Communication. ERIC represents the major federal effort to disseminate information to the educational community.

The potential for increased federal support of developing systems seems good, too. "In time, the predominate share of the dissemination dollars of the Office of Education will no doubt go to the support of services that connect with the user and help him apply information for increasing the effectiveness of educational programs." (Burchinal, 1970, p. 275)

In 1969, a three-state pilot project was approved to launch dissemination programs in Oregon, Utah, and South Carolina. Today, programs for statewide educational information networks are starting up in six more states and in four large regions of other states. The newly organized National Center for Educational Communication in USOE is the funding source for these projects. Its director, Dr. Lee G. Burchinal, has stated:

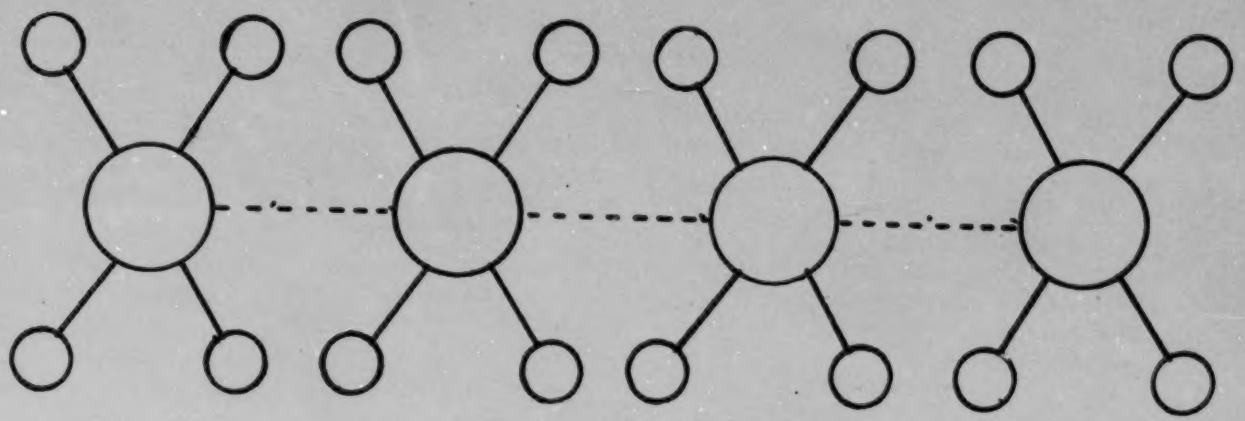
> The theory, practices, and delivery systems developed for science and technology can work just as well for educators. . . this is where the USOE comes in: resources from the Office of Education can provide help for developing and strengthening existing communication channels and for assisting groups to take advantage of recent advances in information systems. The Office of Education is attempting to develop communication resources that no single educational organization or even any combination of them could undertake and to provide assistance for helping to link separate resources. (1968)

Two excellent examples of emerging networks may be found in Iowa and California. Theoretically, both of these networks are directive in nature; however, their individual settings and needs create two very different systems operationally.

The Iowa network, when operational, will be developed around 12 of 16 regional centers which now serve joint county school systems as intermediate resource units funded under Title III, ESEA. They have replaced the separate county school in providing instructional, media, and related classroom-connected services. These centers serve 107 local school districts with public school (K-12) enrollments of 230,000 students in a land area of about 9,000 square miles.

The twelve centers will be the operational heart of the system. All are connected by phone, special van/delivery routes, and/or overnight mail service to the schools in each area. They are almost ideal prototypes for the concept of locally based "one stop" or "drive-in" information centers.

This system might be described visually (Figure 6) as a number of independent nodes informally linked to one another, with each operating as a directive network within its own designated service area.



_____ Formal linkage/communication channels

- - - - Informal linkage/communication channels

Fig. 6

The emerging California network, on the other hand, will operate through a central source, the San Mateo Bay Area Information Center (BAIC), which will be supported in its functions by nine satellite centers, as depicted in Figure 7.

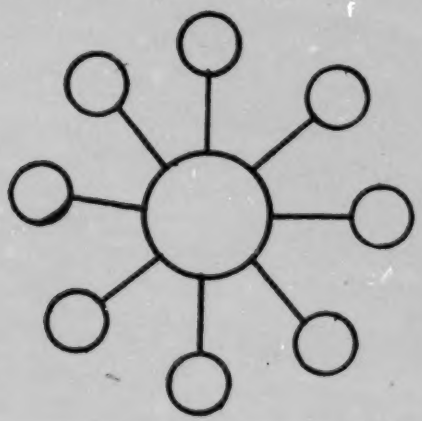


Fig. 7

What distinguishes the California from the Iowa network is its central source center, which provides a unifying force for the network as a whole. Such a system could potentially provide greater overall efficiency in terms of cost effectiveness and search capabilities.

BAIC will take the lead in preparing for and managing an on-line retrieval service. This service is a natural extension of both BAIC's existing manually oriented search services and its current use of computer services for storage, collection, retrieval, and catalogue printouts of BAIC-collected fugitive materials and projects. With the expansion and decentralization of services that will result from the proposed statewide plan, it is particularly essential that rapid search service be provided in a cost-effective manner, to preclude the necessity for multiple acquisition and installation of the very same files. On-line service can meet this requirement. Although BAIC, as part of the extension and expansion of its own model operations, will be the primary user of the service, substantial use from the other agencies participating in the system is anticipated.

In this major respect, the California system has advantages that tend to outweigh those of the Iowa system as it is presently conceived. The centralization of the retrieval source makes possible effective utilization of advanced technology unfeasible for a decentralized system, such as the one planned for Iowa. In this sense, the California system is addressing itself to the realities of the technological age and is attempting to optimize the potential application of information systems in the educational community.

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TEAM ACTIVITY GUIDE

Session No. 1

Time: 180 minutes

Materials Needed:

Carousel Slide Tray: "The Emerging Role of the Educational Information Consultant"
Cassette A (Side 1): "The Emerging Role of the Educational Information Consultant"

Equipment Needed:

Carousel Slide Projector
Cassette Recorder
} furnished by local information center

Activities

Step One (30 min.): View and then discuss slide-tape presentation, "The Emerging Role of the EIC."

Step Two (60 min.): Discuss the readings and the material covered in the Individual Activity Guide.

Some questions which may be of assistance in furthering your discussion include:

What is the function of a network in relation to the EIC role?

Can you define the service role of the information center within the educational framework?

What are some of the personal attributes and technical skills important to the effective fulfillment of the linker's role?

Step Three (30 min.): Complete Performance Evaluation.

Step Four (60 min.): Tour the information center.

Performance Evaluation ($)

For the purpose of providing personal feedback and some reinforcement on the materials covered thus far, answer the following questions based upon

(continued)

TEAM ACTIVITY GUIDE

your readings and the audiovisual presentation. Mail your written responses in the enclosed envelope.

1. What are the five major EIC processes?
2. Define in a brief paragraph the emerging role of the EIC.
3. What are at least three possible backgrounds from which an EIC might come?
4. Where (in what locations) might an EIC fulfill the functions of his role?
5. What are some of the tasks and problems of the knowledge linkers?

MODULE: SIMULATION OF THE EIC ROLE

Definition

The simulation of the EIC role is an interactive instructional sequence based on pre-structured individual, group, and observational activities which illustrate the major EIC processes of negotiation, retrieval, transformation, communication, and evaluation. The experience is designed to involve the trainee either directly or indirectly in a complete "walk-through" of the steps involved in receiving, processing, fulfilling and evaluating a client's request for information on a given problem.

Objectives

The following instructional objectives specify intended knowledge and skill outcomes for this module. When you complete it, you should be able to:

1. Critique an EIC/client interview in order to become conversant with the nature of the negotiation process.
2. Identify major elements of the retrieval process by naming sources of educational R and D information relevant to a given problem.
3. Choose appropriate formats for the transformation of information to be returned to the client.
4. Critique an EIC presenting transformed material to a client.
5. Express an understanding for the value of evaluation within the context of the EIC role.
6. Describe the sequence and relationship of the processes comprising the EIC role.
7. Express a willingness to strive toward higher levels of performance in the knowledge and skills required to function effectively as an Educational Information Consultant.
8. Express commitment to the importance of helping educators improve opportunities to learn by providing well-tested R and D information and products.

INDIVIDUAL ACTIVITY GUIDE

Preparation for Team Session No. 2

Material Needed:

A Process Model of the Educational Information Consultant Role

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Preparation

Introduction. This module is a self-contained overview of the EIC role, emphasizing the major processes of the role and the maintenance of a performance record, or "Paper Trail," which the EIC amasses in servicing a particular client. During the three-hour team session for this module, you will complete exercises designed to introduce you to each of the five processes involved in the EIC role. You will become familiar with what an EIC does and what he is and will become acquainted with forms used by the EIC in planning, developing, conveying, and evaluating his package for the client.

In this module, all activities take place within the team structure and thus provide a highly interactive session. In the Team Activity Guide, you will notice that the activities are broken into five "elements" which are introduced briefly here.

INDIVIDUAL ACTIVITY Review *A Process Model of the Educational Information Consultant Role* and the following explanation of it. Relate the model to the simulation activities which will occur during the Team Session No. 2.

The focal point of the model is the Linkage System, a network of local, district, county, regional, and/or state educational information dissemination services, which connects sources of information with school personnel responsible for classroom practice. These sources of information are labelled the "Resource System" and the school personnel, the "User System." The agent who provides services at various levels within the Linkage System is the Educational Information Consultant or EIC. The EIC interacts with both Resource and User Systems.

In the model, both the Linkage System and the EIC are depicted as "responsive" to the User System--that is, linkage services are activated primarily by requests from clients needing assistance. Response to a client consists of a sequence of activities which the EIC performs. The EIC begins interaction with the User System when a client, seeking information to solve a problem, first contacts the EIC. The EIC, whether functioning at a local, district, county, regional, or state level, "responds" by helping the client to analyze, assess, and define specifically the problem and corresponding information need. This process is

(continued)

INDIVIDUAL ACTIVITY GUIDE

labelled Negotiation.

The next step, Retrieval, is a process through which the EIC interacts with the Resource System. After planning a strategy for locating information relevant to the client's problem, the EIC searches selected sources. Once pertinent information is retrieved from these sources, the EIC then moves into Step III, Transformation. This process is internal to the Linkage System. It requires that the EIC screen, organize, analyze, and/or synthesize the information retrieved until it is in a form which is "actionable." "Actionable" means that the information is compiled in a format and style appropriate for delivery to the client so that he can then use the information, with minimum effort, to solve his problem.

At Step IV, Communication, the EIC again interfaces with the User System. The EIC presents to the client a package of transformed information on the problem. Whether verbal or written, communication is the process which makes clear to the client the results of the EIC's search. Communication completes the linkage of Resource and User Systems.

Evaluation, Reformulation, and Adjustment, as presented in the model, are ongoing processes. Evaluation measures effectiveness on three dimensions: (1) the individual EIC's performance of each of the other four linkage processes; (2) the overall performance of the EIC role; and (3) the performance of the system setting in which the EIC functions. Evaluation is conducted to determine whether the Linkage System is successful in servicing the User System, in utilizing the Resource System, and in fulfilling the linkage functions. Reformulation and Adjustment introduce changes, implied by the findings of Evaluation, in linkage processes, functions, and modes of interaction with Resource and User Systems.

Each major EIC process identified in the model--Negotiation, Retrieval, Transformation, Communication, and Evaluation--will be the topic of one of the five elements in the Simulation Module.

Element 1: The Negotiation Process

Negotiation is one of the most crucial processes of the EIC role. During this process, you discuss and define with the client the nature and scope of his problem. Subsequent handling of the client problem is extremely dependent on the adequacy and effectiveness with which you and the client define the problem. Without a problem definition, your ability to proceed successfully through the remaining four processes can be significantly hampered.

The EIC Negotiation Checklist is designed as a guide to the recording of data needed to search for and transform information on the client problem. In addition to gathering pertinent data about the client

(continued)

himself, the EIC helps the client to narrow down the problem statement. The EIC needs to elicit from the client key words or identifiers which will aid in retrieving information on the problem. The EIC Negotiation Checklist assists the EIC in accomplishing this process.

The Observer Checklist, on the other hand, is a rating instrument designed to tell the EIC how well he performed his role during the negotiation process. In this module, you will be expected to complete one Observer Checklist after hearing a taped EIC/client negotiation. Bear in mind that, later in the course, during the module on Negotiation, you will be using this form to rate one another as you role play an EIC.

Element 2: The Retrieval Process

The retrieval process involves developing a search strategy and identifying, locating, and securing information relevant to the client's request. Use of the Search Referral Form at an initial stage in the retrieval process provides the EIC with a large number of search alternatives from which to choose. With this form, the EIC can begin to plan his search strategy. It will assist him in identifying potential sources of information on the client's problem. The form is then a guide for the early stages of retrieval--pinpointing a number of sources from which the search may be launched.

The selection and planning of an appropriate search strategy for retrieval is essential. By conscientiously developing a workable set of search terms and a plan for reviewing sources, you will enhance your efforts at retrieving information directly relevant to the client problem.

Element 3: The Transformation Process

The primary purpose of transformation is to prepare and present retrieved information in such a way that it satisfies the client's need for information on the problem negotiated. In some cases, transformation may involve only a logical reordering of materials for presentation to the client. In others, it may require a great deal of simplifying and abstracting of retrieved documents in order to make the information readily understandable to the client. The nature and extent of transformation the EIC needs to do will depend on the client, the problem, and the information available.

In satisfying the client's request, the EIC must make sure that the subject matter, publication dates, level of detail, etc., of the selected material conform to the needs, purpose, and level of sophistication of the client. Your record of the plan for the client's information package on a Transformation Checklist can be compared with the client's request as recorded on the EIC Negotiation Checklist. You, as the EIC, can thus assure yourself that the package you are preparing is oriented properly and will serve your client appropriately.

(continued)

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Element 4: The Communication Process

Communication is an integral part of the EIC role in that the way in which you communicate a transformed information package may determine your success or failure as an EIC. The communication process involves displaying and conveying the results of the search to the client in a style appropriate for use in finding a solution(s) to the problem. Particularly close attention should be paid to the nuances of this process. The EIC must be aware of all signals, both verbal and nonverbal, given him by his client.

The EIC/Client Communication Checklist is designed to help you rate an EIC's performance in communicating the retrieved and transformed information to a client. This checklist consists of questions which, essentially, are guidelines to conducting a constructive analysis and evaluation of the EIC performance as a communicator.

Element 5: The Evaluation Process

Evaluation provides you with the necessary information to assess and improve your performance of the major EIC processes and the overall role, as well as the effectiveness of the setting within the linkage system in which you, as an EIC, are operating. (Refer to the *Process Model of the Educational Information Consultant Role* for display of the linkage system.) Evaluation enables the EIC to reformulate and make adjustments in the way specific processes and/or the overall role are conducted.

Data for this evaluation is derived from two main sources--yourself and the client you have served. Forms and checklists developed and/or used during negotiation, retrieval, transformation, and communication on a client problem provide a written record for self-analysis of performance. Feedback in written form from the client is the other main source of data on the effectiveness of your service as an EIC. By synthesizing the information received from these different sources, you can evaluate your overall performance and better prepare yourself for the decision-making process which is a necessary outcome of evaluation. This decision-making process focuses on the adjustments in performance you must make to assure effectiveness, flexibility, and acceptance of your role as a linkage agent serving the client system.

The following documents mentioned above constitute what might be called a "Paper Trail":

1. EIC Negotiation Checklist
2. Observer Checklist
3. Search Referral Form
4. Search Procedure Form
5. Transformation Checklist
6. EIC/Client Communication Checklist
7. Client Feedback Form
8. EIC Self-Evaluation Form

(continued)

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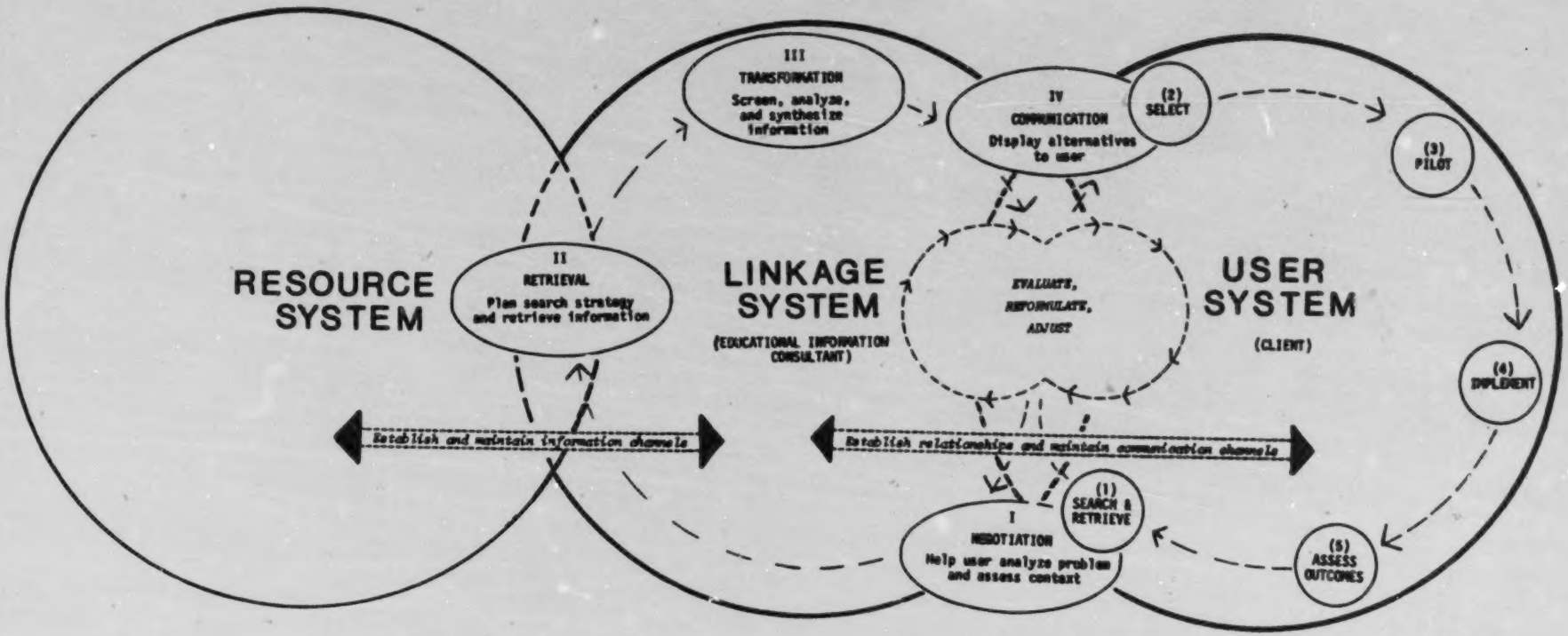
This "Paper Trail" is developed as you progress from process to process. During study of the Evaluation Process in a later module, the Paper Trail you have accumulated on a real client problem will be used to provide the basis for an evaluation and synthesis of your performance as an EIC. Proper maintenance of the Paper Trail throughout all the processes is thus essential in order to assure effective evaluation of the EIC role.

A PROCESS MODEL OF THE
EDUCATIONAL INFORMATION CONSULTANT ROLE



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Session No. 2

Time: 150 minutes

Materials Needed:

Observer Checklist
EIC Negotiation Checklist (completed on the twelve-month school)
Search Referral Form
Bibliography of Retrieved Materials for Twelve-Month School Transformation Checklist
EIC/Client Communication Checklist
Cassette B (Side 1): "Simulation-Negotiation/Communication"

Equipment Needed:

Cassette Recorder

The content for this team activity is based on a hypothetical client request for information on how to implement the twelve-month school concept at elementary grade levels.

Element 1: The Negotiation Process — Time: 35 minutes

Step One (10 minutes): Familiarize yourselves with both the Observer Checklist and the partially completed EIC Negotiation Checklist on the twelve-month school.

Step Two (10 minutes): Play Cassette B--"Simulation: Negotiation" (first seven minutes on Side 1) and complete the rest of the EIC Negotiation Checklist, indicating type of request, statement of problem, and search terms, based upon your listening to the taped simulation of the negotiation process.

Step Three (10 minutes): Complete the Observer Checklist.

Step Four (5 minutes): Compare and discuss completed Observer Checklists.

Element 2: The Retrieval Process — Time: 30 minutes

Step One (15 minutes): Using the EIC Negotiation Checklist completed during Element 1, fill out a Search Referral Form, indicating for

(continued)

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yourselves possible sources of information on the twelve-month school concept.

Step Two (15 minutes): Compare individual responses and discuss why some sources would seem more appropriate than others.

Element 3: The Transformation Process Time: 30 minutes

Step One (15 minutes): Review the Bibliography of Retrieved Material for Twelve-Month School and select materials from the Bibliography which seem pertinent to the needs defined in the completed EIC Negotiation Checklist.

Step Two (10 minutes): Record your choices on and complete the rest of the Transformation Checklist.

Step Three (5 minutes): Compare and discuss your completed Transformation Checklists.

Questions to consider include:

> Does the information entered on the Transformation Checklist correspond to the data compiled on the EIC Negotiation Checklist--publication dates, subject area, parameters established, etc.?
>
> Do the items selected and formats for presenting these items seem appropriate to the needs, purpose, and level of sophistication of the client?

In satisfying the client's request, the EIC must have accurate and satisfactory answers to these important questions.

Element 4: The Communication Process Time: 30 minutes

The communication process involves conveying the results of the search to the client in a style appropriate for his use in finding a solution(s) to the problem. In this element, you will listen to a taped role-playing of a telephone communication between an EIC and a client and fill out an EIC/Client Communication Checklist.

Step One (7 minutes): Play Tape Cassette B--"Simulation: Communication" (second seven minutes on Side 1).

Step Two (10 minutes): Complete an EIC/Client Communication Checklist, based on the recorded EIC/Client communication.

(continued)

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Step Three (13 minutes): Discuss the completed EIC/Client Communication Checklist and the communication process.

Some suggested questions for discussion include:

1. Why is the manner in which a transformed package is communicated to a client of such critical importance to the success of the EIC role?

2. How could the EIC in the taped simulation improve his communication skills?

Element 5: The Evaluation Process — Time: 25 minutes

Complete the Performance Evaluation as indicated.

Performance Evaluation ($)

In a paragraph or two, evaluate the EIC role performance as developed in this simulation on the twelve-month school problem. This evaluation can be based on completed components of the Paper Trail (including the completed Observer Checklist, EIC Negotiation Checklist, Search Referral Form, Transformation Checklist, and EIC/Client Communication Checklist), your own observations, and any other source of input you may have available to you. Mail your response in the envelope provided.

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

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10. During the interview, did the EIC restate or paraphrase the Client's problem correctly?

    a. Completely correct
    b. Mostly correct
    c. Partially correct
    d. Not at all
    e. Don't remember

11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

    a. Yes
    b. Hinted
    c. No
    d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

    a. Yes
    b. No
    c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

    a. Yes
    b. Partially
    c. No
    d. Don't remember

    If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

    a. No, none were descriptive
    b. Yes, agreed some were
    c. Yes, agreed most were
    d. Yes, agreed all were
    e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

    a. Unresponsive
    b. Slightly responsive
    c. Responsive
    d. Extremely responsive
    e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

    a. Clearly
    b. With some understanding
    c. Vaguely
    d. Not at all
    e. Cannot say

17. How did the Client appear at the conclusion of the interview.

    a. Lost
    b. Not fully satisfied
    c. Satisfied
    d. Don't remember

Comments: (Use other side, if necessary.)

EIC Negotiation Checklist

1. Client: *Claude Serok* Date of Request: *3/ 1/72*
   Position: *Ass't Supt., Instruction* Date Needed: *3/10/72*
   School/District: *Ritzville Unified School District*
   Address: *1259 Umatilla Avenue* Phone: *RI8-1996*

2. Problem Area: *Implementing the twelve-month school concept in two of the elementary schools within the district.*
   Age/Grade Restriction: *Grades K-6*
   Other Restriction(s): _____

3. Purpose of Request: *To identify available sources on the concept and implementation of two 12-month schools in order that a selected committee can develop a position paper for presentation to the school board.*

4. Type of Request:
   - [ ] Specific Reference
   - [ ] Methods
   - [ ] Programs
   - [ ] Special Resources
   - [ ] Theory
   - [ ] Research and Evaluation
   - [ ] Other (Specify:)

   Depth of Search: *In-depth* Level Back to 19 *66*
   Additional Information: *Would like evaluations of currently operational programs, if available.*

5. Type of Materials Requested: *Journal articles, evaluation studies, consultants, and other pertinent information. Organize material to provide a logical base for developing a position paper.*

6. Statement of Problem:

7. Search Terms:

Person taking request: *Melisa Grey*

BIBLIOGRAPHY OF RETRIEVED MATERIAL
FOR TWELVE-MONTH SCHOOL

Explanation. This bibliography will be used during the Transformation Element of the Simulation Module. Your instructor will provide you with the necessary information for its use.

ERIC Documents

ED 011 688
Bauman, W. Scott. *THE FLEXIBLE SYSTEM, AN ECONOMIC ANALYSIS OF ADVANATAGES OF THE QUARTERLY CALENDAR IN PUBLIC SCHOOLS.* Toledo University, Ohio. College of Business Administration. 1966.

ED 033 436
_____. *THE SCHOOL CALENDAR DILEMMA--A SOLUTION FOR THE APPROACHING CRISIS.* Oregon University, Eugene. Bureau of Business and Economic Research. 1969.

ED 041 382
Bentley, Ernest L. *FOUR-QUARTER SCHOOL YEAR. RESULTS OF AN EXPLORATORY STUDY OF THE FOUR-QUARTER YEAR IN METROPOLITAN ATLANTA.* 1969.

ED 031 801
Florida State University, Tallahassee. Department of Educational Administration Florida State University, Tallahassee. Institute for Social Research. *AN EXAMINATION OF THE SOCIO-ECONOMIC IMPLICATIONS OF THE ADOPTION OF INDIVIDUALLY PRESCRIBED INSTRUCTIONAL SYSTEMS BY SCHOOL SYSTEMS. FINAL REPORT.* 1969.

ED 020 587
Thomas, George I. *EXTENDED SCHOOL YEAR DESIGNS--AN INTRODUCTION TO NEW PLANS OF SCHOOL ORGANIZATION WHICH CAN RESULT IN FINANCIAL ECONOMIES AND PROVIDE MORE EDUCATION FOR ALL PUPILS.* New York State Education Department, Albany. 1966.

ED 020 003
Witherspoon, Ralph L. *EFFECT OF TRIMESTER SCHOOL OPERATION ON THE ACHIEVEMENT AND ADJUSTMENT OF KINDERGARTEN AND FIRST THROUGH THIRD GRADE CHILDREN. FINAL REPORT.* Florida State University, Tallahassee, Institute of Human Development. 1968.

ED 050 495
McKague, Terence R. and Glen H. Penner. *RESCHEDULING THE SCHOOL YEAR: THE REPORT OF A FEASIBILITY STUDY FOR SASKATOON PUBLIC SCHOOLS.* Saskatoon Public Schools (Saskatchewan). Saskatchewan Department of Education, Regina. 1971.

ED 048 524
Gove, James R. and J. Patrick Page. *FEASIBILITY STUDY OF FULL YEAR PUBLIC SCHOOL OPERATION (VALLEY VIEW 45-15 CONTINUOUS SCHOOL YEAR PLAN) BY DETAILED ANALYSIS OF REQUIRED SCHEDULING PLANS AND ACCOMPANYING CONSEQUENCES. FINAL REPORT.* Valley View School District 96, Lockport, Illinois. 1970.

ED 043 937
Suslow, Sidney and Michael J. Riley. *YEAR-ROUND OPERATION AT BERKELEY: BACKGROUND AND IMPLEMENTATION.* University of California, Berkeley. Office of Institutional Research. 1968.

ED 013 654
Keene, James W. *AN ECONOMETRIC MODEL OF THE CALIFORNIA PUBLIC JUNIOR COLLEGE OPERATING YEAR-ROUND.* California State Department of Education, Sacramento. 1967.

ED 029 394
Thomas, George I. *IT'S TIME TO RESCHEDULE THE SCHOOL YEAR.* 1969. "Twelve-Month School Year: Panel Discussion." *COMPACT*, October, 1970, pp. 28-30.

ED 022 252
Wehmhoefer, Roy A. *THE TWELVE MONTH SCHOOL YEAR, A STUDY OF THE ADVANTAGES AND DISADVANTAGES OF THE FOUR QUARTER SYSTEM.* 1968.

CIJE Abstracts

EJ 030 620
The Valley View 45-15 Continuous School Year Plan.
Beckwith, Robert M., Amer Sch & Univ
pp19-28, Nov '70

A comprehensive report of the Valley View, Illinois School District School Year Plan. Background, necessity, improved learning opportunities, vacation, scheduling, staff employment and economics are discussed.

EJ 022 753
The Myth of the Teaching "Profession".
Ferguson, Wayne S., Amer Sch Board J
pp25-26, July '70

A California school district superintendent looks at year-round schools as a way of achieving "professionalism" for teachers.

EJ 022 280
The Extended School Year: A Status Report.
Adams, Velma A., Sch Management pp.13-18.
June'70

Some analysis of the problems concerning year-round school. It was felt that many of the American people would not permit the idea.

EJ 016 996
Year-Round School
Scala, Anthony W., NASSP Bul pp79-89,
Mar '70

A comprehensive discussion of four kinds of plans now existing in New York State. Extensive analysis of the extended school year students' calendar.

EJ 012 686
Why One District Rejected Year-Round Schools.
Ames, Robert G., Nation's Sch p94,
Dec '69

A one-page report on what one community (Germantown, Wisc.) thought in extending the school year.

EJ 006 625
Year-Round School: Can Boards Sidestep It Much Longer?
Jensen, George M., Amer Sch Bd J
pp8-12, July '69

A report indicating that school boards can no longer avoid the issue. Included are some graphs on how nine year-round plans in Michigan compare.

Journal Articles

American Association of School Administrators. *Year-Round School.* Washington, D.C.: the Association, a department of the National Education Association, 1960. 26 pp. (Out of print) Excerpts: *Education Digest* 26:8-10; February 1961. *NEA Journal* 50: 55-56, May 1961.

American School and University. "News" California Tries Year-Round High School: Idea Gaining Popularity at College Level." *American School and University* 38:80; February 1966.

Boodnick, Allan. "Educational Stepchild." *Bulletin of the National Association of Secondary School Principals* 50:54-59; March 1966.

Borel, William P. and Robert C. Blackmon. "Year-Round School: Innovation or Trend?" *Boardman* (Baton Rouge, Louisiana), October 1967. pp.2, 5-8, 22-27.

Greene, Tom. "Georgia Schools Plan 12-Month Year." *Education News* 2:9; January 8, 1968.

Holton, Samuel M., editor. "Extended School Year." *High School Journal* 47:224-63; March 1964. (Chapel Hill: University of North Carolina Press.)

Hungate, T. L., and E. J. McGrath. *A New Trimester Three-Year Degree Program.* New York: Teachers College, Columbia University, 1963.

Instructor. "Soundoff: Lengthening the School Day Will Increase Learning Efficiency." *Instructor* 72:8-9; October 1962.

National Education Association, Research Division. *The Rescheduled School Year.* Research Summary 1968-72. Washington, D.C.: the Association, 1968. 40 pp.

National School Public Relations Association. "Eight High Schools in the Atlanta, Georgia, Area Will Begin Year-Round Operations Next September." *Education U.S.A.*, November 20, 1967. p. 68.

National School Public Relations Association. "News Front: An 11-Month School Year is Recommended in a Four-Year Study by the New York State Education Department." *Education U.S.A.*, April 1, 1968. p. 170.

Rothwell, Angus B. "What is Meant by Extended School Year?" *Wisconsin Journal of Education* 98:8-9; May 1966.

School Management. "The All-Year School: Time for a New Look? (An interview with James E. Allen, Jr.) *School Management* 10:86-92, 146-56; February 1966.

School Management. "All-Year High School--Experiment Ends in Failure." *School Management* 10:73; November 1966.

Media Materials

Films:

"The Twelve Month School and Mathematics," University of California Film Library, Berkeley, California. No. 018-179. Color. 22 minutes.

"Evaluating the Year-Round School," University of California Film Library, Berkeley, California. No. 018-185. B and W. 17 minutes.

Transformation Checklist

Client: _____ Date Information Received: _____

Position: _____ Date Package Completed: _____

School/District: _____ Date Package Needed: _____

Address: _____ Phone: _____

1. Delivery Mode:

   ___Telephone ___Letter, Memo ___Direct

2. Package Utilization Aids Included:

   ___List of Contents ___Instructions for Use ___Other (Specify:)

   ___Description of Contents ___Suggestions for Review Priorities

3. Package Contents:

Item Selected				Format	Delivery Form			
Author/ Source	Title	Date	Type of Information		Micro-fiche	Photo-copy	Loan	Re-lease

Package prepared by: _____

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The EIC/Client Communication Checklist

Notes on_____
(EIC's name)

Instructions. Observing others as they convey information they have gathered will sharpen your own communication skills. Heightened awareness of how others handle transactions of the type we have been studying will lead to more accurate perception of one's own performance under similar circumstances.

Familiarize yourself with this form before the EIC and Client begin. Listen carefully when information is exchanged and also observe the style with which the EIC communicates. Perhaps you will observe something you do not understand. Questions about techniques or comments about the progress of the interview may occur to you. Jot them down in the space provided. Do not let this distract you from observing, however.

After the interview is over, check the one response to each of the following questions which most closely approximates your observation of how and what took place during the EIC/Client communication interview.

During the communication interview, did the EIC. . .

1. Attempt to restate the client's problem?

   a. No, not at all
   b. Yes, made a brief attempt
   c. Yes, restated
   d. Do not know

2. Make reference to the "contract"?

   a. No, not at all
   b. Yes briefly
   c. Yes, clearly made reference
   d. Do not know

3. Explain the organization of the information in the client's "package"?

   a. Gave a good explanation
   b. Made some effort to explain
   c. Made no apparent attempt to explain
   d. Cannot say

4. Suggest ways to use the information?

   a. Not at all
   b. Only a few
   c. Some suggestions made
   d. Excellent suggestions made
   e. Cannot say

5. Explain the limitations of the packet?

   a. Gave a complete explanation
   b. Touched on the subject
   c. Made no mention
   d. Do not remember

6. Explain how client can obtain additional information?

   a. No explanation made
   b. Briefly mentioned other possibilities
   c. Explanation of other possible sources
   d. Cannot say

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7. Make evaluative judgment(s) about the quality of this specific packet?

   a. Yes, explicitly
   b. Yes, vaguely
   c. No, not at all
   d. Did not notice

8. State his level of competence to select, make judgments about relevance, and transform information?

   a. Clearly stated
   b. Mentioned briefly
   c. No mention made
   d. Cannot say

9. Offer additional help to client?

   a. No, did not offer
   b. Mentioned casually
   c. Made a definite offer
   d. Cannot say

10. Listen carefully to the client's questions?

    a. Paid close attention
    b. Seemed somewhat distracted
    c. Did not pay attention
    d. Cannot say

11. React positively to nonverbal communication from the client?

    a. Had a positive reaction
    b. Had an occasional reaction
    c. Had no reaction whatsoever
    d. Cannot say

12. Convey the information in a confident and believable manner?

    a. Yes
    b. Haltingly
    c. No
    d. Cannot make a judgment

13. Conduct the interview with ease?

    a. Yes
    b. Somewhat nervously
    c. No
    d. Cannot say

14. Did the extent and the depth of the search seem consistent with the client's request?

    a. Yes
    b. Apparently
    c. No
    d. Cannot say

15. Did the client express, verbally, satisfaction with the service he received?

    a. Yes
    b. With some apparent reservation
    c. No
    d. Cannot say

16. Did the client indicate dissatisfaction, nonverbally, concerning the service he received?

    a. Yes, strongly indicated
    b. Apparent dissatisfaction
    c. No indication
    d. Cannot say

Suggestions to the EIC for more effective communication:

MODULE: NEGOTIATION

Process Definition

Negotiation is the process of identifying, analyzing, assessing, and defining specifically the problem and attendant information need(s) of a client. This requires that the EIC and client interact to focus and define the client's problem. The two may negotiate in person, in writing, or on the telephone to reach agreement on a precise statement of the client's problem and to record what type of information the EIC will secure and the client can expect to receive.

Process Objectives

The following instructional objectives specify intended knowledge and skill outcomes for this module. When you complete it, you should be able to:

1. Define the process of negotiation within the context of the EIC role.
2. Explain the effect(s) of the negotiation process on performance of the EIC role.
3. Ask questions about a client's problem which elicit information essential to a precise formulation of the search request.
4. Guide face-to-face interviews in order to: (a) interpret and clarify a client's information needs, and (b) set priorities among them.
5. Listen in order to comprehend fully and objectively what is said in formal and informal interchange with client(s).
6. Communicate orally in order to develop rapport with a client and to transmit information and ideas effectively.
7. Make general inferences as to the client's concerns, motivations, and level of expertise in terms of the problem area.
8. Compose precise written and oral descriptions of a client's problem.
9. Formulate a satisfactory contract with a client for the service(s) to be provided.
10. Recognize whether the statement of a client's problem requires further clarification, analysis, or redefinition.
11. Question, discuss, and secure relevant information from a client when there is a need to redefine or restate the problem.

INDIVIDUAL ACTIVITY GUIDE

Preparation for Team Session No. 3

Materials Needed:

Question-Negotiation and Information Seeking in Libraries
by Robert S. Taylor
Explanation of the EIC Negotiation Checklist
Reference Sheet: *Designing the Negotiation Checklist*
Four sample forms:
Search Request Form, San Mateo County Office of Education
Request for Literature Search, ACCESS Information Center
Inquiry Form, Michigan-Ohio Regional Educational Laboratory
Literature Search, Research and Information Services for Education
Reference Sheet: *Stating a Problem for Negotiation*

Preparation

Element 1: Observing the Negotiation Process

As an EIC, you are likely to receive and negotiate client requests for information in one of three ways: (1) face-to-face, (2) in writing, and (3) over the telephone. Face-to-face negotiation with a client is probably the most thorough and personalized mode for identifying a client's problem and information need. This mode also involves application of both verbal and nonverbal communication skills. You will also receive written requests from a client for information on a problem. These may be submitted in a variety of forms, such as letters, memos, etc. To make this form of negotiation effective, you may want to provide a supply of standardized request/negotiation forms to potential clients so that the client provides all data you need to search for information on the problem. The third mode--telephone requests--can be an efficient and effective way to handle negotiation of a client's problem. Success in this mode depends heavily on your use of verbal communication skills. The tape you will hear during Team Session No. 3 is an example of a telephone interview between an EIC and a client.

Questioning is an essential skill in negotiation. It enables you, the EIC, to identify the real problem and to elicit from the client information which is fundamental to formulation and diagnosis of the problem.

Ability to guide discussion is also needed, to provide structure for defining the problem clearly and to help the client prioritize what his information needs are.

(continued)

INDIVIDUAL ACTIVITY GUIDE

Ability to analyze the client is involved somewhat in negotiation, at least to the extent that you as an EIC can make inferences as to the real concerns, knowledge and sophistication of the client.

Listening is an essential skill, too. As an EIC, you must comprehend fully and clearly what the client reveals about the problem and the information needed.

Ability to develop rapport with the client is also important so that the client will have confidence in your integrity, competence, and understanding of his needs.

INDIVIDUAL ACTIVITY Read: *Question-Negotiation and Information Seeking in Libraries* by Robert S. Taylor and the *Explanation of the EIC Negotiation Checklist.*

Element 2: Negotiating a Client Problem

Even when given the same problem, forms, and instructions, different people get different results. The individual's frame of reference affects his understanding of the problem. It is therefore important to arrive at an understanding of your client's frame of reference and to coordinate it with your own during the negotiation interview.

The search terms, sometimes called descriptors or key words, are important from your point of view because they help to guide your search for information about the client's problem. Search terms are keys to the use of resources in that they relate to subject matter indexes or topics used in card catalogs, ERIC, and other specialized resources.

In a "real" negotiation, you would most likely not discuss search terms directly with your client, but would probably develop a mental list which you verify during the interview as you converse with your client. They represent a translation of the client's terminology into terminology which can be used to plan and guide a search for information about the client's problem.

Element 3: Designing the Negotiation Checklist

The initial step in your major assignment for this course--which requires that you fulfill another team member's request for information on a problem of special interest to him or her--is to prepare for negotiating your team member-client's problem. Essential to this preparation is the design of a form for recording data on what the problem is and what information is needed.

(continued)

INDIVIDUAL ACTIVITY GUIDE

INDIVIDUAL ACTIVITY Read the reference sheet, *Designing the Negotiation Checklist*, and review the four sample forms. Design a negotiation checklist or form suitable for recording data pertaining to a client's problem and information needs.

Element 4: Stating a Problem for Negotiation

A second component of your major assignment is the selection of a problem and information request for another team member to search. It is important that the other team member, and not you, search the problem because it is a simulation of a real-life, EIC-client situation in which you are the client.

INDIVIDUAL ACTIVITY Read the reference sheet: *Stating a Problem for Negotiation*. Prepare and bring two (2) copies of your problem statement to Team Session No. 3. (It is important to prepare a problem which relates to education since a major purpose of this assignment is to give the other team member handling your problem some experience in using educational information resources.)

ROBERT S. TAYLOR

Question-Negotiation and Information Seeking in Libraries

College and Research Libraries, May 1968

Seekers of information in libraries either go through a librarian intermediary or they help themselves. When they go through librarians they must develop their questions through four levels of need, referred to here as the visceral, conscious, formalized, and compromised needs. In his pre-search interview with an information-seeker the reference librarian attempts to help him arrive at an understanding of his "compromised" need by determining: (1) the subject of his interest; (2) his motivation; (3) his personal characteristics; (4) the relationship of the inquiry to file organization; and (5) anticipated answers. The author contends that research is needed into the techniques of conducting this negotiation between the user and the reference librarian.

Delbruck's Principle of Limited Sloppiness

You should be sloppy enough so that the unexpected happens, yet not so sloppy that you cannot figure out what happens after it has happened.—in Eiduson, Bernice T. *Scientists: Their Psychological World* (1962), p. 126.

THE MAJOR PROBLEM facing libraries, and similar information systems, is how to proceed from "things as they are now" to "things as they may be." It is an illuminating exercise to extrapolate from present technology to describe the library of the future. However, such exercises have little to say as to how to proceed from "now" to "then."[1]

There are two possible alternatives to this process of change, with a whole range of options.[2] First the revolutionary concept: libraries will wither away and their place in the communications network will be taken by some new institutional form, probably imposed from the outside. The second one, an evolutionary development, is that libraries themselves will gradually make the transition.

The work described here is based on the second alternative. The objective was to examine and analyze certain relationships between library system and library user. It is hoped that this paper develops sufficiently fruitful generalizations, so that further investigations can start at a different level, with new assumptions. It

Mr. Taylor is Director of the Library at Hampshire College, Amherst, Mass. The work described here was accomplished at Lehigh University, while the author was Director of the Center for the Information Sciences, and was supported by grant from the Air Force Office of Aerospace Research, AF-AFOSR-724-66. This paper is a summary of a report of the same title, issued as Report No. 3 (July 1967) in the Series, Studies in the ManSystem Interface in Libraries, *published at Lehigh University.*

[1] J. C. R. Licklider, *Libraries of the Future* (Cambridge: The M.I.T. Press, 1965).

[2] Philip H. Ennis, "Technological Change and the Professions: Neither Luddite nor Technocrat," *Library Quarterly*, XXXII (July 1962), 189-98.

is further hoped that, as a result of future investigations in this area, the evolution of libraries from passive warehouses to dynamic communication centers will be less traumatic and more effective.

This paper is not concerned with the usual library automation, although the effect that automation may have on the interface between user and system is recognized. In time, the automation of routine processes, *i.e.*, order, catalog, and circulation control, after the bugs are worked out, will allow a different level of interaction. But routine automation is merely an extension of the control and warehousing functions of libraries. The work described here is an early effort to understand better the communications functions of libraries and similar types of information centers, *because this is what libraries are all about.*

Consequently this paper is concerned with two phases of this interface, which revolve around the process of negotiating the question. This act of negotiation usually takes one or both of these forms: (a) working through a human intermediary, *i.e.* the reference librarian; (b) self-help, by which the user himself attempts, often unsuccessfully, to sharpen his question by interacting with the library and its contents.

Reference librarians and information specialists have developed, both consciously and unconsciously, rather sophisticated methods of interrogating users. These methods are difficult to describe, indeed some believe they are indescribable. No such assumption is made here, in the belief that there *are* gross categories or levels of information which are consciously sought and received by the librarian in the negotiation process. We are dealing here of course with a very subtle problem—how one person tries to find out what another person wants to know, when the latter cannot describe his need precisely. There are a few good but unsystematic papers on the reference functions, but very little has been done of an analytical nature.[3]

In the self-help process, the user depends upon his own knowledge, frequently incomplete, of the system. It appears that there are a large number of users of information systems who, for a variety of reasons, will not ask a librarian for assistance. They develop their own search strategy, neither very sure of what it is they want nor fully cognizant of the alternatives open to them.

Both of these processes have some things in common: the development of a strategy of search, and frequently a change in the type of answer anticipated or acceptable as the search or negotiation continues. There is an implicit assumption in this paper, which intuitively seems valid. Most experimental work with retrieval systems and most attitudes toward reference questions look upon the inquiry and the relevance of answers as single events. This is mistaken. An inquiry is merely a micro-event in a shifting non-linear adaptive mechanism.[4] Consequently, in this paper an inquiry is looked upon not as a command, as in conventional search strategy, but rather as a description of an area of doubt in which the question is open-ended, negotiable, and dynamic.[5]

The first part of the paper discusses and analyzes the negotiation process as practiced by reference librarians and information specialists. The author is in-

[3] M. Francillon, "Information Retrieval: A View from the Reference Desk," *Journal of Documentation*, XV (December 1959), 187-98; Margaret K. Goggin, ed., "Current Trends in Reference Services," *Library Trends*, XII (January 1964); Ellis Mount, "Communication Barriers and the Reference Question," *Special Libraries*, LVII (October 1966), 575-78.

[4] D. M. Mackay, "Operational Aspects of Some Fundamental Concepts of Human Communication," *Synthese*, IX (Issue 3, No. 3-5, 1954), 182-98.

[5] L. B. Doyle, "Is Relevance an Adequate Criterion in Retrieval System Evaluation," in American Documentation Institute, 26th Annual Meeting, October 1963, *Automation and Scientific Communication*, Part II, 199-200; R. S. Taylor, "The Process of Asking Questions," *American Documentation*, XIII (October 1962), 391-96.

debted to a number of professionals who subjected themselves to taped interviews ranging in length from sixty to ninety minutes. The interviews were limited to special librarians and information specialists for several reasons.[6] First, they are usually concerned with substantive questions. Second, their inquiries usually come from highly motivated and critical people who have an idea what is acceptable as an answer. Third, to find material, the librarian must understand and therefore must negotiate the question. In contrast, public and academic librarians, because of the nature of their clientele and institutions, have educational responsibilities and staff restrictions which limit their response to inquiry. One special librarian pointed out:

> The levels of frustration in using libraries are awfully high for most people. It's amazing, as hard as we work at making ourselves popular with these people, we still have them come in and stand diffidently at our desk and say, "Well, I don't want to interrupt, but . . ." To which I reply, "If you don't interrupt me I don't have a job." But it's amazing how people can't get over this. I think it would be a study in itself, that we grow up in school libraries, public libraries, and college libraries, generally where this kind of service is not provided. Consequently you are conditioned to feeling that the library is a place you almost have to drag something out of. The library is almost the last place they want to go, because they've been conditioned.[7]

The interviews were open-ended and unstructured.[8] They were designed to elicit three things, described in the librarian's own words:

1. What categories of information does a librarian attempt to obtain from an inquirer?
2. What is the role of system file organization in the negotiation process?
3. What kinds of answers will inquirers accept and what influence might this have on the negotiation process?

Question Negotiation by Librarians

Without doubt, the negotiation of reference questions is one of the most complex acts of human communication.[9] In this act, one person tries to describe for another person not something he knows, but rather something he does not know. Quantitative data about this process is non-existent. In spite of its complexity, however, it is possible to say certain things about it and to form a gross classification of the process. This is a first necessary step toward a basis for valid observation and the statement of testable hypotheses.

It is worthwhile in this consideration of the negotiation process to attempt to understand what a question is. Although reference librarians and other "question negotiators" count what are called "questions," this is not really what this paper is concerned with. Let us attempt to reconstruct in general terms this negotiation process, that is, as it pertains to the interaction between an inquirer and an information specialist.

The inquirer has what D. M. Mackay calls "a certain incompleteness in his picture of the world—an inadequacy in what we might call his 'state of readiness' to interact purposefully with the world around him,"[10] in terms of a par-

[6] In this report, the designations "reference librarian," "librarian," "information specialist," and "subject specialist" are used interchangeably. There are differences. In this report, however, these terms are used merely to identify the person negotiating the question, in contrast to the "inquirer," who poses the questions and requires information in some form as an answer.

[7] Unacknowledged quotations in this paper are from the taped interviews with reference librarians and information specialists. It was mutually agreed that such quotations would be anonymous. Minor editing has been done for clarity only.

[8] Stanley L. Payne, *The Art of Asking Questions* (Princeton, N.J.: Princeton University Press, 1951). Stephen A. Richardson, et al., *Interviewing, Its Forms and Functions* (New York: Basic Books, 1965).

[9] N. D. Belnap, Jr., *An Analysis of Questions: Preliminary Report*. Document TM-1287 (Santa Monica, California, 1963); R. F. Simmons, "Answering English Questions by Computer: A Survey," *ACM Communications*, VIII (January 1966), 53-70.

[10] D. M. Mackay, "What Makes a Question," *The Listener*, LXIII (May 5, 1960), 789-90.

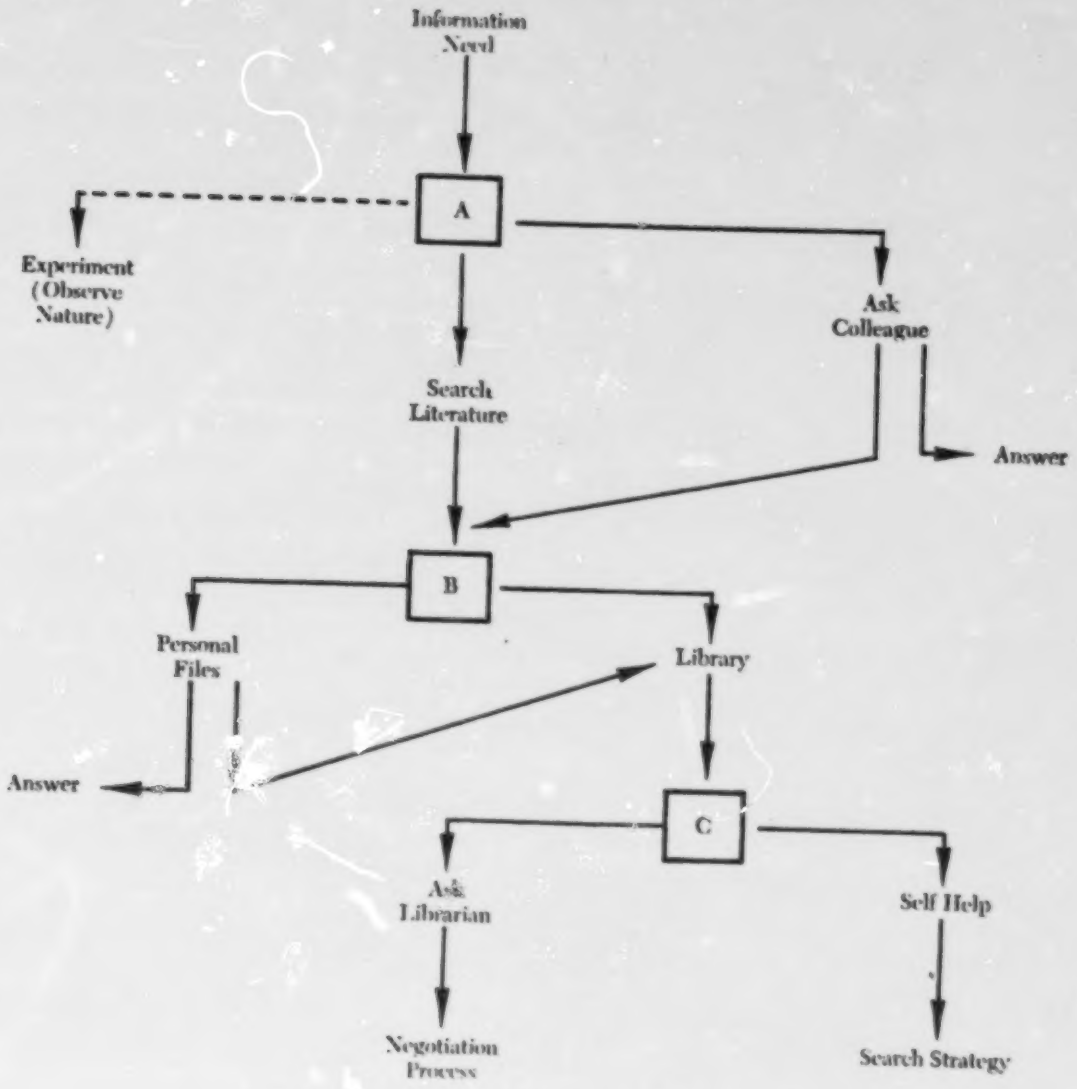


FIG. 1. Prenegotiation decisions by the inquirer.

ticular area of interest. He comes to the library or information center as one of several possible alternatives, for information to fill out "his picture of the world." These alternatives themselves pose an important problem, illustrated in Figure 1.

In Figure 1, at decision point A, the inquirer decides whether to discuss his problem with a colleague or to go to whatever literature or information center may be available. Before he disturbs a busy colleague, he is likely to make a minimum search of his own files. This will happen only, however, if he has analyzed his "inadequacy" sufficiently to be able even to look through his own files.

He also makes a second decision (B in Figure 1): to go to the library or information center. This is an important choice and reflects a number of factors: previous experience, environment (is this an accepted procedure in his activity?), and ease of access. Studies of information-seeking behavior indicate, for example, that "ease of access" to an information system is more significant than

"amount or quality of information" retrievable.[11]

At decision point C he makes another choice of paths: *(a)* to ask an information specialist; or *(b)* to help himself. Most important in this decision is the inquirer's image of the personnel, their effectiveness, and his previous experience with this or any other library and librarian.

All three of these decisions will have an influence, largely undetermined, on the negotiation process. It is not the intent of this paper to do more than list these prenegotiation choices as forming part of the context and background for the process itself.

Assuming that the inquirer has made these choices and has arrived at the desk of the information specialist, he then specifies in some form what it is he hopes to find out. "Arrived" can mean any of several communication modes: by letter, by telephone, or by direct face-to-face interview. It is at this point that negotiation begins. Before consideration of this process, it is first necessary to discuss various levels of questions. In general we can describe four levels of information need and the configuration of question which represents each level.[12]

1. First of all, there is the conscious or even unconscious need for information not existing in the remembered experience of the inquirer. It may be only a vague sort of dissatisfaction. It is probably inexpressible in linguistic terms. This need (it really is not a question yet) will change in form, quality, concreteness, and criteria as information is added, as it is influenced by analogy, or as its importance grows with the investigation.

2. At the second level there is a conscious mental description of an ill-defined area of indecision. It will probably be an ambiguous and rambling statement. The inquirer may, at this stage, talk to someone else to sharpen his focus. He presumably hopes that two things will happen in this process: *(a)* his colleague will understand the ambiguities; and *(b)* these ambiguities will gradually disappear in the course of the dialogue.

3. At this level an inquirer can form a qualified and rational statement of his question. Here he is describing his area of doubt in concrete terms and he may or may not be thinking within the context or constraints of the system from which he wants information. By the way, he may view the librarian as part of the system at this level, rather than as a colleague. This distinction is important. As one interviewed librarian said: "For most people, I am the information system."

4. At the fourth level the question is recast in anticipation of what the files can deliver. The searcher must think in terms of the organization of particular files and of the discrete packages available—such as books, reports, papers, drawings, or tables.

These four levels of question formation shade into one another along the question spectrum. They are stated here only as convenient points along a continuum. They may be outlined as follows:

Q_1—the actual, but unexpressed need for information (the *visceral* need);
Q_2—the conscious, within-brain description of the need (the *conscious* need);
Q_3—the formal statement of the need (the *formalized* need);
Q_4—the question as presented to the information system (the *compromised* need).

[11] Victor Rosenberg, "The Application of Psychometric Techniques to Determine the Attitudes of Individuals Toward Information Seeking," *Report No. 2, Studies in the Man-System Interface in Libraries* (Bethlehem, Pennsylvania: Center for the Information Sciences, Lehigh University, July 1966).

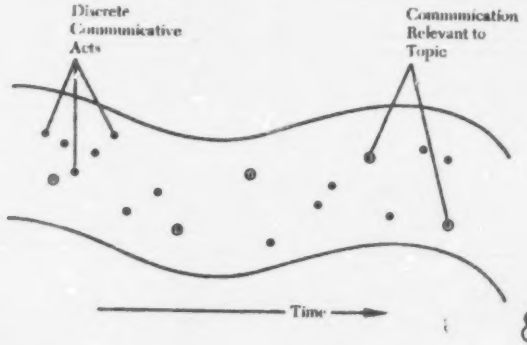
[12] James W. Perry, *Defining the Query Spectrum—The Basis for Designing and Evaluating Retrieval Methods* (n.p., 1961 (mimeo.)); Taylor, *op. cit.*

Unless the inquirer knows the information specialist well, he is inclined to pose his first question in positive and well-defined terms, even to the point of specifying a particular package (Q_4). If the specialist is accepted as a colleague, the negotiation process can start earlier and be much more fruitful. An important necessity for such acceptance appears to be subject knowledge. As one information specialist put it: "A person with a technical background will handle a technical subject in less than half the time and with more competent and thorough results." This is where the process of negotiation starts. The compromised question (Q_4) is the information specialist's business, the representation of the inquirer's need within the constraints of the system and its files. The skill of the reference librarian is to work with the inquirer back to the formalized need (Q_3), possibly even to the conscious need (Q_2), and *then* to translate these needs into a useful search strategy.

This is a directed and structured process, although there are of course many different styles and many levels of competence and knowledge on the part of both librarian and inquirer. There are certain obvious traits which will help the librarian: empathy, sense of analogy, subject knowledge, and knowledge of files, collection, and clientele.[13]

[13] Francillon, *op. cit.*

FIG. 2. Schematic representation of communications between two friends over time.



The negotiation process is a form of communication. It is illuminating to contrast it with normal conversation, in which one person finds out in random fashion about another's interest. Figure 2 shows the stream of communicative acts on a variety of subjects between friends over a period of time. However, embedded in this conversation are elements of a subject of interest, which one person is communicating randomly to his friend. Communicative acts are shown by a dot; those which are relevant to the subject are circled.

In contrast, the negotiation process must compress both the boundaries of the interview and the time span. More information must be communicated in less time. This requires both direction and structure on the part of the information specialist. Figure 3 illustrates this compression, where relevant communicative acts are much more frequent.

From the interviews with librarians and information specialists there appear to be five filters through which a question passes, and from which the librarian selects significant data to aid him in his search. It is the structure of these filters, modified for the specific inquiry, that provides the compression of subject and time illustrated in Figure 3. These five general types of information necessary for the search definition are not mutually exclusive categories. The listing is approximately in order of occurrence, although they may occur simultaneously, *i.e.*, relevant data for several filters may be embedded in a single statement by the inquirer.

They may be briefly stated as follows:

1. determination of subject;
2. objective and motivation;
3. personal characteristics of inquirer;
4. relationship of inquiry description to file organization;
5. anticipated or acceptable answers.

The problems associated with these "filters" are well known, even obvious,

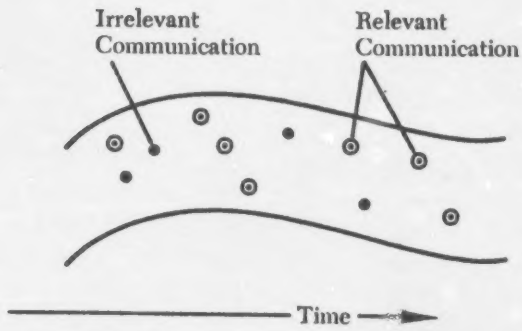


FIG. 3. Schematic representation of communication between inquirer and librarian during negotiation process.

to active librarians and information specialists. They have not been put together in rational form before.

DETERMINATION OF SUBJECT

Determination of the *limits and structure of the subject* of the inquiry comprise the content and aim of the first filter. The information culled at this level of negotiation is of course closely intertwined with that of the second filter (the objective and motivation behind the inquiry). However, the two filters appear to have a sufficiently different function and necessary style of negotiation to require separate consideration for each.

At the first pass the primary purpose of negotiated subject definition is to provide some general delineation of the area: from biomedicine to genetics to the genetic code in DNA. Continued dialogue on the ramifications and structure of the subject will define, expand, narrow, and qualify the inquiry.

X said he was interested in "contact terminals." Well, that's rather a vague term, and it probably took me a few minutes to find out what he meant by that. He might not even have started with that terminology. He meant "binding post" type of terminals. I probably asked him a question like: "Do you mean the type of spring terminals that are used in jacks, plugs and jacks?" He said, "No," and probably then said something about "binding posts." And I remarked "Oh, you mean soldered terminals." He probably replied, "No, that's where the contact comes into it, I mean the wrapped type." And so after a few exchanges like that, I would have gotten a picture in my mind as to what he was talking about. This is where my practical experience in radio engineering is helpful, because I can visualize these things.

At some stage, depending on the state of other relevant categories of information, it may be necessary to call a halt to this initial phase, in order to allow the librarian to make a brief search to determine the extent of the subject. He can then come back to the inquirer with "Is this what you mean?" or "Is this in the ball park?" From discussion in answer to these questions, the subject is further limited and qualified. This form of dynamic interaction may continue for some time, until the librarian is satisfied he knows what is wanted.

Engineer X will come in and say "Gee, I have these three references on subject A. I've got all the ones I know about. Are there any more?" He may just stop in passing. This may develop into a major project, just because the man is so busy, he is not aware of the vast amount of information available to him. Once the subject is defined, we define the peripheral areas that may bear upon this. We inform him of our basic search strategies so he feels he is part of the effort. And we inform him how he in turn can interact with us, depending on the time constraints. If it is a long term project, he will receive in the normal course of his work material we may not be aware of. In turn we ask that he input these data to us. And if it becomes necessary for one of our people to go to his office and physically go over and read some of the more important papers on the subject, we will do this. So there is a continuous interaction between the people in the information research group and the scientist and engineer asking for the material.

The fact that they write the question doesn't help one bit. We think if it's written it's clear. You know "put it in writing." But you get no feedback with writing. It's the dialogue, the feedback that is the important

thing. For the librarian, the important thing is this awareness of the fact that you will need feedback in order to make sure of what you've got. You have to have this suspicion—a sensing of when it is you know what it is the inquirer wants, and when it is you are sure he has got it clear, and when it is you are not sure.

Motivation and Objective of the Inquirer

The second filter or category of information negotiated is probably the most critical: Why does the inquirer want this information? What is his objective? What is his motivation? This requires subtlety in negotiation, but usually has a high payoff in subject definition. It further qualifies the subject, or may even alter the entire inquiry. It also offers an opportunity to ascertain the point of view and influence the size, shape, and form of possible answers. Most of the librarians interviewed felt strongly that this type of question was critical to the success of any negotiation and consequent search. In those instances where this is not the case, the librarian's approach is that the inquirer (a) knows what he wants, (b) knows more than the librarian, and (3) is aware of the search strategies necessary to satisfy his *need*. None of these assumptions appear to be wholly valid.

Unless you are sure what the why is, you can never be sure what it is the person really wants. What's he going to do with the information . . . We can't help him unless we understand his needs as well as he does.

It is an obvious truism to every librarian who works at an information or reference desk that inquirers seldom ask at first for what they want. When they reach the point of confessing, "But this is really what I want to know . . . ," the acute librarian knows he is over a major hurdle:

Inquirers frequently cannot define what they want, but they can discuss why they need it. Consequently they are inclined to ask very specific questions, as if they were ashamed to hold up their ignorance for everyone to see. These may include an innocent and unambiguous request for a directory address, which develops into a search on molds; a request for a copy of *Aviation Week* which turns into a basic and broad company proposal on commercial aviation; an inquiry to verify if there is a place called P , which turns into a search for information on rat repellants. In these cases, as one interviewee pointed out, "My function is to help him decide what it is he wants."

The first step is to be eternally suspicious and the realization that in most cases they simply don't tell you what it is they really need. I think this is a matter of human communication–that we need the dialogue to frame up what we are after. I find this is true even in the simplest questions. There is that eternal suspicion that what they ask is probably not what they really want.

Personal Background of the Inquirer

The third level or category of information necessary in the negotiation process has to do with the personal background of the inquirer. What is his status in the organization? Has he been in the library before? What is his background? What relationship does his inquiry have to what he knows? What is his level of critical awareness? Answers to these types of questions have relevance to the total negotiation process. It may well determine the urgency, the strategy of the negotiation, the level of any dialogue, and the critical acceptance of search results. In short, it is the context, the environment for the negotiation process. It determines what questions should and may be asked.

Because we get to know our clientele personally, we know the type of response they need and require. We know whether a person is a thorough individual, or a less thorough one. In the latter case, it may be somewhat frustrating at times when you

know you haven't gone far enough, yet they are satisfied.

Have I worked with him before? This makes a great deal of difference. If he is an old timer and I've worked with him before, I know pretty well what steps I can take in negotiating the question. If he is a stranger, or relative stranger to the information service, it presents a problem to me. Some of the questions I might ask are: What group are you working with? Who is your leader? Where he is situated in the organization is important. His status. Whether he is at ease or not. Sometimes we get people who feel very inadequate in coming to the library. They may come to us as a last resort, not knowing what they are getting into. They may feel that they are exposing themselves to someone looking over their shoulder. That is a position we don't want them to feel in.

There are many problems in this facet of negotiation. An instance cited by one interviewee is when an inquirer, who may be in his own right a highly competent researcher, is used as a high level messenger by, for example, the vice president for research. It is at this point, as the librarian pointed out, that experience and personal knowledge of the organization and people become important. The "messenger" frequently may not know the background and motivation for the inquiry. It is here that the librarian must make some educated guesses and associations based on experience. He must in some way bring the vice president into the dialogue, without undermining the reputation of the "messenger."

Relationship of Inquiry Description to File Organization

An information specialist or a reference librarian is an intermediary, an interlocutor, between the inquirer and the system. As such, the negotiation process not only provides him with a substantive description of the inquiry, but also supplies him clues for devising his search strategy. He becomes a translator, interpreting and restructuring the inquiry so it fits the files as they are organized in his library.[14] In the symbolism discussed earlier, he must construct a Q_4, or a set of Q_4's, so that the total system can be searched efficiently.

The inquirer will state briefly his problem over the phone. This is not enough so we go to him. We very likely do not discuss the specific problem but rather the relationship of the problem to the work he is doing. How does it tie in? We work from the general to the specific. He will often use a blackboard. What are the limits of the problem? In many cases we redefine the approach because he isn't familiar with the search strategy. So we redefine the problem to match the search strategy necessary. The inquirer is usually not aware of the sources available to him.

If we view the negotiation process as a "game of chess" as one librarian suggested, the librarian has a tremendous advantage. He is the one who knows the rules of the game; the inquirer doesn't. The "rules of the game" are the organization, structure, associations, and specific peculiarities of the files. The quotation above hints this: "We redefine the problem to match the search strategy." *The implications of such a statement, if taken at face value, can have the effect of redefining librarianship.*

It should be understood that the "files" refer not only to the catalogs, indexes, abstracts, and other standard files of the library. There is also the "who knows what" file, not on cards but in the librarian's memory. There are special files: previous requests, news notes, recent items read, the unstructured notes (or pieces of paper napkins) in the librarian's desk drawer. There is the sense, or activity, of building the inquiry into the system—the system including the information specialist and all the relevant files.

[14] Susan Artandi, "The Searchers—Links Between Inquirers and Indexes," *Special Libraries*, LVII (October 1966), 571-74.

Referring people to other people is one of the methods we use. But before referring them, we ask "Whom have you talked to? Are you working by yourself or with others? Do you know X? Do you want to talk to X, or should we?" You see, we don't want to go charging off in all directions, duplicating effort.

As much as possible, the librarians interviewed also tried to elicit from the inquirer any stray bits of information from his specialized knowledge that would give clues in support of a search strategy.

One of the standard qeustions we ask: "To your knowledge what will probably be the most fruitful area in which to search?" This opens up some leads . . . often, he will say something like, "Well, I think there was a Proceedings of the IEEE about 1963 and I thought I saw something in there. Maybe that will give you a lead." In this particular case his hint was sufficient to open up the problem for us.

What the inquirer is saying is "Here is a paper. I'd like ones similar to it, or similar to it in this specific way."

What Kind of Answer Will the Inquirer Accept?

When an inquirer approaches the reference desk, he has some picture in mind as to what he expects his answer to look like, *i.e.* format, data, size, etc.[15] The problem of the inquirer's acceptability of an answer is an important filter in the process of answering inquiries. One of the results of the negotiation process is to alter the inquirer's *a priori* picture of what it is he expects. This picture is altered as the inquirer changes his question in response to feedback, as he becomes aware of the capabilities of both the library *and* the librarian, as he changes his search strategy in the negotiation process, and as he is forced in the negotiation process to place limits of time and size on his inquiry.

The sense of urgency in the inquiry definitely has an influence on the type of answer expected.

The inquirer may say "I need this in 30 minutes." By doing so he has pretty well determined what form he will accept and what questions I can ask.

Whether or not the inquirer is asking for information in his own specialty will shape the kind of answer useful to him.

If a person is asking for a search in his own field, then you can sit down and talk to him. If he is asking in a field peripheral to his interest, then he has probably been asked to express an opinion on something. He doesn't want a search, but rather something limited, for example a review or a state-of-the-art paper.

Undoubtedly the subject field of the library and its clientele has a bearing on the type of answer expected, in ways we do not even know about yet. For example, in the law[16] it appears that the questions are very precise, but the answers are less precise. This is due to the nature of precedence in the law, in which a law, a court ruling, or an administrative regulation *might* be pertinent to a specific case, and are the only answers available. They don't however answer the question. Training in the law appears to make a difference. As one librarian put it: "I can almost tell the law school by the type of question."

One of the nagging problems in the delivery of answers seems to be the degree of evaluation the information staff can and should make. There are of course a variety of factors at work here: the librarian's own capability; the inquirer's attitude; and the available time. One interviewed librarian described the problem as follows:

Now the next level beyond this is one in which we have hardly done anything at all,

[15] Caroline E. Hieber, "An Analysis of Questions and Answers in Libraries," *Report No. 1*, Studies in the Man-System Interface in Libraries (Bethlehem, Pennsylvania: Center for Information Sciences, Lehigh University, June 1966).

[16] Lord Radcliffe, "How a Lawyer Thinks," *Lancet*, CCLXX (January 1956), 1-5.

primarily because we don't have the manpower. But I think it is probably the most important. . . . That is to make an evaluation of these materials. Just to hand someone a batch of raw abstracts is not enough; or even a list of numbers; paper A says the property equals this, paper B says it's that, and so on. Well, if they don't agree, shouldn't someone read the papers, and decide what were the experimental techniques, and give these a weight? That is, this is the most significant number, or the most valid number, or this is a significant average. We have just not been able to do it except in a few rare instances. Now the hope had been—when I say "hope" I don't mean only ours, but from the top of the Research and Engineering Department down—that, if we gave the individual chemist or engineer these other materials, he would do this evaluation. The evidence is that he doesn't do it. I would say only 1% actually do it. The others will take the first number at the top of the pile, some will average all the numbers, some will apparently take the number that fits their number best. You know, it's the human problem.

Perhaps the most important obstacle to evaluation by the librarian is the sense of puritanism on the part of both librarians and management who believe, for ethical rather than economic reasons, that everyone should do his own work. Such an ethos is at odds with the sense of service in librarianship, with the requirements of management for the best information as soon as possible, and with the growing complexity of libraries in a "data-rich civilization."

Explanation of the EIC Negotiation Checklist

1. Describe the client. Note his position, address, telephone, etc., for your records and future correspondence. This data may contain some clues about his status and background, the context of his problem, and questions to ask.

2. Define the problem area. Ask the client to describe explictly the problem and the solution(s) he seeks. For example, if the problem is a curricular or instructional need, help him to expand or narrow the specific subject area and qualify levels, and any other restrictions. If it is administrative, ask him to describe the nature of it. Restate the problem to make sure you understand what he's said and to allow him to clarify it further. It may help to ask what his situation will look like when the problem is solved.

3. Define how the information will be used. Ask the client when and why he needs the information. Does he plan to use it for himself, for a teacher training workshop, for a curriculum committee, for his superintendent or district supervisor, etc.? Find out his purpose or goal in requesting the information. His response may define the problem further (or even alter the inquiry) and help to clarify the quantity, depth, and type of information he needs.

4. Define the type of request. What does the client expect you to get--a specific reference, such as a project or research report he's heard about, information he hasn't heard of personally, but would like you to find, on current teaching methods, curriculum or instructional programs, theory or background in the problem area, available research and evaluation reports, or special resources, such as a list of consultant-experts in the field or ongoing projects, etc.? How extensively does he want you to delve for information? Does he want an in-depth search or just enough information to get an overview of the problem area? From how far back in time will information be acceptable? Note under "Additional Information" whether the client has any specialized knowledge to help direct your search on the problem--for example, can he name people or schools working on solutions to the problem, relevant journals or reports, and so on. Ask if he has already consulted any resources.

5. Describe the type of materials requested. What should be the form of the information you return to the client? Does he want you to condense the information for him or present exactly what you find? Should you, for example, prepare a bibliography of available sources and organize it by topic or annotate it? Does he want to see actual curriculum materials; anecdotal, research, or evaluation reports; state-of-the-art reviews; summaries? Should you list names of authorities or other sources of information? The time he can spend reviewing the information and its importance to the solution of his problem may provide clues about the amount and format of the information to provide.

6. State the problem. Write a concise, two- or three-sentence summary description. Be sure to note any restrictions delimiting the nature or scope of the problem.

7. List search terms. When you finish interviewing, list as many key words as you think can be used to plan and define your search for information--for example, "social studies, secondary," "curriculum materials," "inquiry learning," etc. These key words are important--they translate the client's problem into terms to guide and conduct a search of subject indexes, card catalogs, ERIC documents, and other resources.

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DESIGNING THE NEGOTIATION CHECKLIST

A precise, written record of the client's problem serves two important purposes: (1) it helps to recall data the EIC needs to plan his search for relevant information and (2) if it is standardized, it serves as a record for filing identifying information about the client.

The following are four different samples of forms which can be used to record information from written, face-to-face, or telephone negotiations between the EIC and client. These forms were developed and are currently used by the following educational information dissemination centers or services: San Mateo (Calif.) County Bay Area Information Center (BAIC), the ACCESS Information Center in Concord, Calif., the Michigan-Ohio Regional Educational Laboratory (MOREL), and the Research and Information Services for Education (RISE).

Review these forms, as well as the EIC Negotiation Checklist and the explanation of it provided in the role-playing exercise you completed in Element (2). Then, design a form which you think is comprehensive enough to record the kinds of client data you would need to find out during a negotiation interview. Make two copies of your form: one for the instructor and one for your own use when you act as EIC and negotiate a problem posed by another trainee. Retrieving, transforming, and communicating information relevant to this trainee's problem will be your major assignment for this course.

SEARCH REQUEST FORM

San Mateo County Office of Education
EDUCATION RESOURCES CENTER
590 Hamilton Street, Redwood City, Ca. 94063 (415) 369-1441 Ext. 2738

Name _____ Date _____

Position _____ Date Needed _____

Affiliation _____ Phone _____

Address _____

_____ Zip

Office Use

RESTRICTIONS:

Time Span of documents to be searched: after 19___ _____

Age or grade restrictions _____

Subject area restrictions _____

Authorities in field _____

LIST MAJOR TOPIC AREA _____

		Interest Level - Check One or More Boxes		
☐ Preschool		☐ Secondary	(7 thru 12)	☐ Research
☐ Kindergarten		☐ Junior College	(13-14)	☐ Concepts - (Theories, Trends, Ideas, Conference Papers)
☐ Primary	(1-2-3)	☐ College	(13-14-15-16)	
☐ Intermediate	(4-5-6)	☐ Adult		☐ Methods - (Models, Plans, Criteria, Formats, Program Guides, Guide Lines, Techniques, Manuals, Teaching Guides and Methods)
☐ Elementary	(1 thru 6)	☐ Administrative		
☐ Middle School	(6-7-8)	☐ Special Ed.		
☐ Junior High	(7-8-9)	☐ K-12 (all)		☐ Reference - (Textbooks, Resource Materials, Dictionaries, Bibliographies, Directories, Statistics, Research Reviews, Conference Reports
☐ Senior High	(10-11-12)			

PLEASE SEARCH:

☐ ERIC only ☐ ERIC and FIDO only

☐ Periodicals only ☐ All Sources

☐ Projects - (Programs, Grants, Program Descriptions)

CONSIDER the information checked in the box(es) above, the major topic area of interest, and the intended use of the information received. Then please write your request in concise terms being as specific as possible in defining your request, OR list specific document numbers desired.

How material to be used (to assist in search): _____

Concise statement of problem: _____

FOR E.R.C. OFFICE USE ONLY

SUBJECT HEADING _____ DATE _____

DESCRIPTORS	ACCESSION NUMBERS ERIC (ED)	FIDO (ID)	CIJE SOURCE

OTHER SOURCES: _____

EVALUATION: _____

Completed _____ Not Completed _____ Why _____

Hard Copy Prints: No. _____ Photocopies: No. _____ Microfiche: No. _____

ACCESS Information Center
2371 Stanwell Drive, Concord, California 94520

Request for Literature Search

Date of Request: _____ Date Needed: _____

Person Making Request: _____ Position: _____

School/Organization Address: _____ Telephone: _____

TOPIC(S):

Type of search ☐ Indepth ☐ Overview ☐ Research Oriented ☐ Program Oriented

Grade Level(s): _____ Purpose of search _____

Search the following collections:

1. ERIC: Send Resumes ____ Send Microfiche ____ Send Reader ____
2. Local Document Collection ____
3. Book Collection:
   Send a bibliography ____ Send a few books ____
4. Search Periodical Articles back to:
   ____ 0-1 years ____ 0-3 years ____ 0-5 years ____ 0-10 years
5. Locate exemplary programs
   Geographic restrictions: ____ County ____ State ____ National

Method of Delivery: _____ Date Sent: _____

Request taken by: _____

Search made by: _____

STATING A PROBLEM FOR NEGOTIATION

Your major assignment for this training program involves receiving, processing, and fulfilling another trainee's request for information on an educational problem of special interest to him or her. You will, in effect, be serving as an EIC. You will follow through on the trainee's problem during subsequent learning activities and, before the end of the training, prepare a package of information on the problem to present to him.

This assignment also requires that you act as a client. You will have to select a problem to give to another trainee during a negotiation interview. Try to choose an education problem which is based on an actual curricular, instructional, or administrative need in your own environment. Define the problem in terms of its nature and scope, the subject area, and special constraints (e.g., age, grade levels, equipment, finances, staff, time, etc.). Write out a brief statement (one page or less) of your problem. Make two copies: one to submit to the instructor and the other for your own reference when you negotiate the problem with the EIC.

For the negotiation exercise, be prepared to ask your EIC for information, materials, resources, etc., which you think will assist you in solving your problem. Think about how you will use the information when you need it, the form in which it would be most helpful to you, the amount of time you have to review the information, and so forth. If you know of or have already consulted sources of relevent information, be prepared to identify them for the EIC.

TEAM ACTIVITY GUIDE

Session No. 3

Time: 155 minutes

Materials Needed:

EIC Negotiation Checklist (2 copies)
Negotiating a Client Problem: A Role-Playing Exercise, Overview
Educational Information Consultant (EIC) Role--Lee Snyder
Client Role--Meredith Ryan
Observer Role
Observer Checklist
Cassette B (Side 2): "A Negotiation Interview"

Equipment Needed:

Cassette Recorder

Element 1: Observing the Negotiation Process Time: 50 minutes

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Step One (20 minutes): Familiarize yourself with the EIC Negotiation Checklist. Then, play Cassette B (Side 2), which takes about 11-1/2 minutes. While listening to the taped telephone interview, fill in the Checklist on the client's problem. When the tape ends, finish filling out the Checklist.

There are two important things to remember about this interview: (1) It is the second contact between the EIC and client. The client is calling back to tell the EIC that she has picked a more specific subject area of the original problem and wants to discuss it with him. (2) It is, by no means, a "model" negotiation. Listen carefully for errors or mistakes the EIC makes in dealing with this client.

Step Two (30 minutes): Discuss the negotiation skills and communication techniques which you observed the EIC using or failing to use.

The following are errors which you may have noted that the EIC made:

1. Misinterpreted the client's statement about the "topical" arrangement of the study units.

2. Obviously misunderstood the client when interrupted with statement, "You might want to talk about how people cleaned off birds in San Francisco Bay."

(continued)

TEAM ACTIVITY GUIDE

3. Asked question about "supplementary materials" which was unclear because client didn't know meaning of the term he used.

4. Showed some lack of ability to develop rapport with client, e.g., couldn't remember who client was when he answered the call; although he called her "Meredith," she might have been somewhat ill-at-ease because she used more formal "Mr. Snyder."

Element 2: Negotiating a Client Problem — Time: 65 minutes

Introduction. This role-playing exercise is an example of a face-to-face negotiation interview between an EIC and client. It is designed to introduce you to some of the skills and abilities needed to negotiate effectively in this type of situation. The problem to be negotiated is a curricular one, selected because it is representative of the types of problems and requests which the EIC will encounter.

You will find that two of the roles--the EIC and Client--involve the same two people you heard on the taped interview. This time, however, Meredith Ryan, the Client, is requesting Lee Snyder's assistance with a different plan for the social studies course and, consequently, a different problem area. Remember, however, that the emphasis of the exercise is on the techniques, rather than the content, of the negotiation.

Step One (5 minutes): Read the Overview sheet, *Negotiating a Client Problem: A Role-Playing Exercise*, and review the schedule for the exercise. Then, decide among yourselves who is going to play the role of EIC, Client, or Observer.

Step Two (15 minutes): Read only your own role description.

Step Three (15 minutes): Complete the negotiation.

Step Four (20 minutes): The EIC completes the EIC Negotiation Checklist, conferring with the Client, if necessary. Each Observer completes his own Checklist. Observers should give the EIC and Client feedback on their performances.

Step Five (10 minutes): Discuss your search terms and, then, the features of the negotiation process which the exercise illustrated.

Discussion. The following are some particularly effective negotiation techniques. Discuss whether or not any of these occurred during the exercise, and if so, how well.

1. At an appropriate point during the negotiation, the EIC should restate or paraphrase the client's problem to determine whether

(continued)

he has understood it clearly and correctly. The EIC should ask the client to confirm the statement of the problem.

2. The EIC should repeat or describe for the client the type of materials and information he plans to retrieve. This will insure that both the EIC and the client understand what the client needs and can expect to receive. This procedure can be compared to that of making a "contract" with a client.

3. It is important to use some kind of form for recording the client's request or problem. In a "real" situation, a precise, written record of the negotiation can help to recall important data about the client and to provide information the EIC may need to plan a search of relevant resources. If the form is standardized, it can also provide a basis for a file system.

4. Affirmative or confirming nonverbal behavior on the part of the EIC is important. During a negotiation, the EIC's general demeanor--gestures, posture, and nonverbal signals--affects the client's attitude toward and response to the EIC.

5. Skillful questioning is essential to the negotiation process. The EIC should use questions which (a) elicit information about the nature of the problem, such as, factual, definition, and clarification questions and (b) help to define the problem specifically and clearly, such as, probing, narrowing down, and interpretive questions.

Element 3: Designing the Negotiation Checklist Time: 20 minutes

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Step One (20 minutes): Discuss any questions about the negotiation checklist you designed. Refer to the *Explanation of the EIC Negotiation Checklist* for guidance as to the type of information which is to be gathered during negotiation and, hence, the types of items which should be included on the form. Compare your form with those of your team members and, if necessary, help each other to modify your checklists.

Element 4: Stating a Problem for Negotiation Time: 20 minutes

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Step One (20 minutes): Discuss any questions you might have concerning "Stating a Problem for Negotiation."

EIC Negotiation Checklist

1. Client: _____ Date of Request: _____
   Position: _____ Date Needed: _____
   School/District: _____
   Address: _____ Phone: _____

2. Problem Area: _____
   _____
   _____
   Age/Grade Restriction: _____
   Other Restriction(s): _____

3. Purpose of Request: _____
   _____

4. Type of Request:
   [ ] Specific Reference: [ ] Theory
   [ ] Methods [ ] Research and Evaluation
   [ ] Programs [ ] Other (Specify:)
   [ ] Special Resources

   Depth of Search: _____Level Back to 19_____
   Additional Information:

5. Type of Materials Requested:

6. Statement of Problem:

7. Search Terms:

Person taking request: _____

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NEGOTIATING A CLIENT PROBLEM: A ROLE-PLAYING EXERCISE

Overview

How does one person learn just what it is that another has in mind? How does he try to find out exactly what that person wants to know? Under many circumstances, information is not easily, nor fully, transmitted.

When a teacher, principal, curriculum supervisor, or other client comes to an EIC, he will most likely need assistance in finding information and resources to help solve a curricular or instructional problem. The client is asking not for something he knows about already, but rather for something he does not know enough about. The EIC has to view the client's inquiry as a question which is only partially formed, still open-ended, and negotiable. The EIC must try to acquire an understanding of the client's perspective on his problem because it helps to make a search for relevant information more effective. One way to gain this perspective is to define the problem through personal negotiation.

The exercise you are about to do involves this process of negotiation. It demonstrates that, even when a client knows what he wants and the EIC knows what to ask, different people communicate different things. The purpose of the exercise is twofold: (a) to illustrate some of the skills and procedures involved in face-to-face negotiation and (b) to introduce you to the role of the EIC, an agent for communicating current educational knowledge and research.

You will group into teams of three, each consisting of a Client, an EIC, and an Observer. For this exercise, the persons playing the roles of the Client and the EIC will conduct an interview to define the Client's specific curricular problem and to identify his corresponding information needs. The person in the Observer role will be responsible for assessing their effectiveness. You and the other members of your team will have to decide which role each person will play.

The schedule for this exercise will run as follows:

1. Find two other colleagues to form a team of three. Choose your roles. (5 min.)
2. Read roles and prepare for exercise. (15 min.)
3. Do exercise. (15 min.)
4. Team discusses exercise. (20 min.)
5. Large group meets to list and compare search terms. (15 min.)

Educational Information Consultant (EIC) Role -- Lee Snyder

You have taken a new position as Educational Information Consultant for the Oakdale Unified School District. You are now in charge of the district's expanded Educational Resources Center. The chairman of the social studies department at one of the high schools in the district heard about your new center and made an appointment to discuss a curriculum problem with you.

Before you proceed with the interview, review the attached EIC Negotiation Checklist and the Explanation of the EIC Checklist. Plan the questions you need to ask your Client.

You will have fifteen minutes to conduct the interview. During that time, you should record on the Checklist the information for Steps 1-5 (not necessarily in that order). Use the Checklist to structure the interview, but don't rely on it exclusively to keep the interview going. Your conversation with the Client will suggest appropriate questions to ask.

Spend some time, too, developing rapport with your Client. The relationship you establish during your first contact with a Client is important. Try to build up his confidence in you and your services.

At the end of the interview, take a few minutes to write out a brief statement of the Client's problem (Step 6) and to list the search terms requested in Step 7 on the Checklist. Check them over with your Client to see whether he agrees that the list is appropriate. Give your list to the instructor. Then, you and the Client will have about ten minutes to get some feedback on your performance from the Observer and to hold a team discussion of the negotiation.

Client Role - Meredith Ryan

Instructions: You are going to talk with an Educational Information Consultant (EIC) about a curricular problem you are facing in your school. You want to determine what information services are available to find possible solutions to it. It is your hope that the EIC will be able to help you define the problem more specifically and to locate some relevant information.

The EIC, Lee Snyder, will be asking you questions about your background, the problem, the type of materials you need, and when and how the materials will be used. Most of the information you will need to answer these questions is provided in your role description below. If the EIC asks for information which is not provided in the role description, improvise a brief response. Do not give out information too readily, though. Let the EIC run the interview; be cooperative, but let him lead.

Role Description: Take a few minutes now to read through the following description of your role before you start to talk with the EIC.

When the EIC questions you about your background, provide the following information:

Position: Chairman, Social Studies Department
School: John J. Lynch High School (Grades 10, 11, 12)

When the EIC asks you what your problem is, give the following information:

In the past five years, a one-semester Problems of Democracy (POD) course offered to twelfth graders has become the least popular elective course in your school. You recently polled the three sections of seniors who are now taking the course to find out what they think is wrong with the course and what could be done to improve it. You found that these students are taking the course because it's an "easy senior elective." The students generally agreed that the content of the course is "dull" and "irrelevant." They claimed that understanding real problems of democracy today doesn't come from learning about how a bill becomes a law or from reading a civics and government textbook. They would like to be more involved in the course, but they feel turned off and alienated by what they have to study.

You and three teachers in your social studies department are trying to revise the course in the hopes of making it more appealing to future students. Right now, you're working on an instructional plan for the opening unit in the course. You have decided to start where the students are by focusing the unit on political alienation among young people. You're hoping that Mr. Snyder will be able to help locate some appropriate materials to use in this two-week unit.

(over)

When the EIC asks you about the type of information you need and when you need it, give the following response:

> Within the next two weeks, your committee would like to start reviewing some sample instructional materials to use in the unit. You would also be interested in seeing any evaluation reports and teachers' comments on the use of these materials. Your committee has to have a final plan for the unit in about six weeks.

PROVIDE THE FOLLOWING INFORMATION ONLY IF AND WHEN THE EIC ASKS FOR IT. DO NOT VOLUNTEER THIS INFORMATION.

If the EIC asks you to describe more specifically what type of information you're looking for, give him one or two of the following responses. Let him probe for the additional information.

a. You want to use some current, published materials to plug in as the content for this unit, if there are any available and if they are not too expensive.

b. The materials must be usable with students of varying abilities.

c. The materials should provide for activity-oriented situations for students, rather than teacher-lecture or highly directive situations.

d. The content must be directly related to or illustrative of problems of political alienation. (Improvise problem areas, if the EIC asks for examples.)

e. The materials must help students to develop understanding of and some basic skills in social science methodology and processes.

If the EIC asks you about the goals for the unit, indicate that you plan to develop specific objectives after you have reviewed some materials, but that you do have the following goals in mind:

a. To identify sources of political beliefs, attitudes, and values and their effects on political behavior.

b. To develop understanding of attitudes, ethical standards, and behavioral patterns which can affect the citizen's sense of political efficacy.

c. To describe the relationship between sense of political efficacy and degree of political alienation.

d. To identify causes and effects of political alienation among students.

Observer Role

In this role, your task is to observe, listen to, and evaluate a negotiation between a Client and an EIC. The EIC, Lee Snyder, will interview a client, Meredith Ryan, who is chairman of a high school social studies department, about a curriculum problem and the information needed to solve the problem. You will act as a detached and objective participant; you do not take any active part in their interview.

You have several tasks to complete:

Before the EIC and Client begin their negotiation, read the questions on the attached Observer Checklist. These items ask you about the effectiveness of the negotiation and about the performances of the EIC and the Client. Although you will not fill out the Checklist until after the interview is completed, you should be as familiar as possible with the questions so that you will know what to look for when the EIC and Client are negotiating the problem.

Scan the Observer Checklist occasionally as you listen to and observe the EIC and Client to remind yourself of the things to look for in the negotiation. Do not try to answer any of the questions while the interview is still in progress.

After the EIC and Client have concluded their negotiation, take about ten minutes to fill out the Observation Checklist. Be sure to answer all items.

When you have completed the Checklist, you will have about ten minutes to give your two colleagues some feedback on their performance. Go over your responses to any questions on the Checklist which assess their effectiveness in the roles of EIC and Client. When you have finished, give your filled-in Observer Checklist to the EIC.

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

(over)
FWLERD 1/72

10. During the interview, did the EIC restate or paraphrase the Client's problem correctly?

a. Completely correct
b. Mostly correct
c. Partially correct
d. Not at all
e. Don't remember

11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

a. Yes
b. Hinted
c. No
d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

a. Yes
b. No
c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

a. Yes
b. Partially
c. No
d. Don't remember

If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

a. No, none were descriptive
b. Yes, agreed some were
c. Yes, agreed most were
d. Yes, agreed all were
e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

a. Unresponsive
b. Slightly responsive
c. Responsive
d. Extremely responsive
e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

a. Clearly
b. With some understanding
c. Vaguely
d. Not at all
e. Cannot say

17. How did the Client appear at the conclusion of the interview.

a. Lost
b. Not fully satisfied
c. Satisfied
d. Don't remember

Comments: (Use other side, if necessary.)

INDIVIDUAL ACTIVITY GUIDE

Preparation for Team Session No. 4

Materials Needed:

None.

Preparation

Element 1: Negotiating a Real Client Problem

The role-playing exercise you will do during Team Session No. 4 will provide an opportunity for each of you to apply what you have learned thus far about the negotiation process. You will, at that time, begin the process of fulfilling another team member's request for information on an educational problem of special personal interest. This is the "real" problem which, as you know, is the basis for your major assignment during this training.

In the role-playing exercise, each of you will have an opportunity to act as: (1) an EIC, to negotiate the real problem of another team member; (2) a Client, to present your prepared problem and information request; and (3) an Observer, to evaluate negotiation interviews your team will complete.

Before the Team Session, review carefully the negotiation checklist you designed and the problem statement you will negotiate with one of your team members.

Element 2: Questioning in the Negotiation Process

The following points relevant to interview technique should be borne in mind as you prepare for negotiating the real client problem:

1. An interviewer generally should open an interview by asking factual nonthreatening questions.

2. The interviewer should locate the major data by unstructured "lead" questions.

3. The interviewer should make use of occasional guide questions.

4. The interviewer should make an effort to pick up leads.

5. The interviewer should cut through generalities with well-formulated probes.

(continued)

INDIVIDUAL ACTIVITY GUIDE

6. The interviewer should reflect on the meaning of emerging data and ask questions that clarify or amplify their meaning for the research problem.

7. The interviewer should try to redirect the interview to more fruitful topics when useful data are not emerging.

8. The interviewer should be alert to "touchy" subject matters and not just blunder in.*

*Excerpted from Carter V. Good. Introduction to educational research: methodology of design in the behavioral and social sciences. 2nd ed. New York: Appleton-Century-Crofts, 1963. p. 294.

There are various types of questions which you, as an EIC, can ask during a negotiation interview--either in a face-to-face or telephone situation--(a) to help the client define his problem specifically, (b) to help him describe the information and/or service needed, and (c) to develop clear and correct understanding of the client's problem and information need:

1. Factual--to elicit essential data about the client and his problem.

2. Definition--to find out the exact meaning of terms or references the client uses or makes.

3. Interpretive or Clarifying--to obtain mutual understanding of what the client said, has agreed to, indicated he wanted, etc.

4. Probing or Focusing--to get the client to reveal essential information pertinent to the problem or its solution and to encourage the client to refine or define his problem specifically.

These types of questions are not mutually exclusive. One question in itself can serve more than one of the above purposes, i.e., it can simultaneously ask for facts, define, focus down, and/or clarify the client's problem.

TEAM ACTIVITY GUIDE

Session No. 4

Time: 165-225 minutes

Materials Needed:

Self-designed Negotiation Checklist
Observer Checklist (in "Paper Trail" section)
Trainee/Client Problem Statement

Equipment Needed:

None.

Element 1: Negotiating a Real Client Problem — Time: 100-160 min.*

Step One: Remember, you will be using your self-designed negotiation checklist when acting as EIC. (Team members who have not designed a checklist can follow the outline of the EIC Negotiation Checklist provided in the Training Manual.) The copies of the Observer Checklist needed are in the "Paper Trail" section of the Training Manual.

Step Two (10 min.): Assign team members a letter designation of A, B, C, D, or E. Refer to the following procedural diagrams for role rotation, depending on the size of the team, i.e., 3, 4, or 5 members. The diagrams indicate which role each team member will play during negotiation of each problem, according to the letter designation assigned to him or her.

For a team of 3:

	Problem Negotiation Numbers		
Role	1	2	3
EIC	A	C	B
Client	B	A	C
Observer	C	B	A

*Depending on the number of team members--figure 30 minutes for each negotiation.

(continued)

TEAM ACTIVITY GUIDE

For a team of 4:

	Problem Negotiation Numbers			
Role	1	2	3	4
EIC	A	D	C	B
Client	B	A	D	C
Observer I	C	B	A	D
Observer II	D	C	B	A

For a team of 5:

	Problem Negotiation Numbers				
Role	1	2	3	4	5
EIC	A	E	D	C	B
Client	B	A	E	D	C
Observer I	C	B	A	E	D
Observer II	D	C	B	A	E
Observer III	E	D	C	B	A

For example, team member B will be the first on the team to act as Client and will present his problem to team member A, acting as the EIC. Moving then to Problem Negotiation Number 2, team member B assumes the role of Observer, while team member A acts as Client, and so forth.

Step Three (90-150 min.): Negotiate the problems. The time schedule must be adhered to closely in order to complete the exercise. The amount of time allotted for each problem negotiation is as follows: 15 minutes for the EIC and Client to negotiate the problem; followed by 15 minutes during which the Observer(s) fill out the Observer Checklist(s) and, then, give verbal feedback to the EIC and Client based on the ratings recorded on the Checklists.

It is important that, after each problem negotiation, each Observer gives his completed form to the EIC. The EIC should file the form(s) and his own completed negotiation checklist in the "Paper Trail" section of his Training Manual. These forms will be used for reference and review in later modules.

(continued)

TEAM ACTIVITY GUIDE

Element 2: Questioning in the Negotiation Process — Time: 35 min.

Step One (10 min.): Review and discuss interview techniques. Relate experiences and skills used in the role-playing exercise with those just used in the negotiations of the real client problems. You might want to review the points for discussion of interview techniques listed in the Individual Activity Guide for Team Session No. 4.

Step Two (15 min.): Discuss the article by Robert S. Taylor you read previously. Focus on his concept of "levels" of questions and how questioning elicits the five general types of information needed for search definition in libraries. Compare this to negotiation as defined in the EIC role.

Element 3: Evaluation — Time: 30 min.

Complete the Performance Evaluation and mail it in the enclosed envelope.

(continued)

TEAM ACTIVITY GUIDE

Performance Evaluation

($) A. Evaluate, in a paragraph or two, the definition of the negotation process in light of the negotiation interviews you have heard role-played, and actually conducted on a real client problem.

B. Assess your individual achievement of objectives for this module, evaluating strengths and weaknesses observed in your own performance of the process. After reading each of the items below, circle the number which most nearly corresponds with your opinion of your ability to:

	Not at All			Very Well
1. Define the process of negotiation within the context of the EIC role.	1	2	3	4
2. Explain the effect(s) of the negotiation process on performance of the EIC role.	1	2	3	4
3. Ask questions about a client's problem which elicit information essential to a precise formulation of the search request.	1	2	3	4
4. Guide face-to-face interviews in order to: (a) interpret and clarify a client's information needs and (b) set priorities among them.	1	2	3	4
5. Make general inferences as to the client's concerns, motivations, and level of expertise in terms of the problem area.	1	2	3	4
6. Compose precise written and oral descriptions of a client's problem.	1	2	3	4
7. Formulate a satisfactory contract with a client for the service(s) to be provided.	1	2	3	4
8. Recognize whether the statement of a client's problem requires further clarification, analysis, or redefinition.	1	2	3	4
9. Question, discuss, and secure relevant information from a client when there is a need to redefine or restate the problem.	1	2	3	4

THE PAPER TRAIL

1. Client's Problem Statement
2. EIC Negotiation Checklist
3. Observer Checklists
4. Search Referral Form
5. Search Procedure Form
6. Transformation Checklist
7. EIC/Client Communication Checklists
8. Client Feedback Form
9. EIC Self-Evaluation Form

THE PAPER TRAIL

The following documents constitute what can be termed a "paper trail." These forms are records of the decisions you have made and actions you have taken as you, in an EIC role, served your client.

The forms are designed especially for training purposes--to provide you with a concrete record of your significant behaviors in performing the processes of Negotiation, Retrieval, Transformation, Communication and Evaluation. Some of these forms--or ones comparable to them--could also be used as aids to on-the-job performance of this role. These would include: EIC Negotiation Checklist; Search Referral Form; Transformation Checklist; and Client Feedback Form.

Careful recording and, later, analysis of these forms should help you to critique the strengths and weaknesses of your performance as an EIC and should help you to make subsequent searches efficient, comprehensive, and objective.

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

(over)

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10. During the interview, did the EIC restate or paraphrase the Client's problem correctly?

    a. Completely correct
    b. Mostly correct
    c. Partially correct
    d. Not at all
    e. Don't remember

11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

    a. Yes
    b. Hinted
    c. No
    d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

    a. Yes
    b. No
    c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

    a. Yes
    b. Partially
    c. No
    d. Don't remember

    If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

    a. No, none were descriptive
    b. Yes, agreed some were
    c. Yes, agreed most were
    d. Yes, agreed all were
    e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

    a. Unresponsive
    b. Slightly responsive
    c. Responsive
    d. Extremely responsive
    e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

    a. Clearly
    b. With some understanding
    c. Vaguely
    d. Not at all
    e. Cannot say

17. How did the Client appear at the conclusion of the interview.

    a. Lost
    b. Not fully satisfied
    c. Satisfied
    d. Don't remember

Comments: (Use other side, if necessary.)

Observer Checklist

For each of the following items, circle the letter that most nearly corresponds with your observation concerning the interaction between EIC and Client. Be sure to answer each item.

1. Did the EIC help the Client state what his problem was?

   a. No, not at all
   b. Yes, helped somewhat
   c. Yes, helped considerably
   d. Yes, actively helped
   e. Cannot say

2. Did the EIC help the Client clarify what he needed?

   a. No, didn't help at all
   b. Yes, vaguely
   c. Yes, somewhat
   d. Yes, a great deal
   e. Cannot say

3. Did the EIC listen to the Client's problem?

   a. Didn't pay attention
   b. Listened, but seemed to be easily distracted
   c. Paid close attention
   d. Don't know

4. Did the EIC communicate to the Client that he understood the problem?

   a. Communicated this very well
   b. Mostly communicated this
   c. Partially communicate this
   d. Didn't communicate this at all
   e. Don't know

5. To what extent did the questions asked by the EIC actually help the Client to clarify his problems?

   a. Didn't help at all
   b. Helped somewhat
   c. Was extremely helpful
   d. Couldn't tell

6. Did the EIC ask questions which indicated that he had a clear grasp of what the Client had said?

   a. Rarely
   b. Occasionally
   c. Frequently
   d. Regularly
   e. Can't say

7. Did the EIC make any effort to find out about the Client's personal motivation, feelings, or attitudes toward the problem?

   a. No effort
   b. Little effort
   c. Some effort
   d. A great deal of effort
   e. Cannot say

8. Did the EIC indicate through his general demeanor, posture, or gestures (such as nodding his head, murmuring "uh-huh," smiling, etc.) that he was encouraging the Client to continue to elaborate and discuss the problem?

   a. Not at all
   b. Intermittently
   c. Frequently
   d. Very frequently
   e. Cannot say

9. Did the EIC ask the Client repetitive questions?

   a. Very frequently
   b. Frequently
   c. Occasionally
   d. Rarely
   e. Don't know

(over)

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a. Completely correct
b. Mostly correct
c. Partially correct
d. Not at all
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11. Did the EIC ask whether the Client was familiar or had any previous experience with this type of problem?

a. Yes
b. Hinted
c. No
d. Don't remember

12. Did the EIC ask the Client what assistance he expected to get from the EIC?

a. Yes
b. No
c. Don't remember

13. Did the Client and the EIC agree on the course of action to be taken (that is, agree on what information was needed and when) before terminating their interview?

a. Yes
b. Partially
c. No
d. Don't remember

If "Partially" or "No," explain why:

14. Did the Client agree that the search terms suggested by the EIC were descriptive of the problem they had discussed?

a. No, none were descriptive
b. Yes, agreed some were
c. Yes, agreed most were
d. Yes, agreed all were
e. Don't remember

The following questions concern the Client's reactions to questions asked by the EIC. Circle the letter that most nearly corresponds with your opinion of the interaction between EIC and Client.

15. How did the Client react to the EIC's questions?

a. Unresponsive
b. Slightly responsive
c. Responsive
d. Extremely responsive
e. Don't remember

16. How well did the Client appear to understand the EIC's questions?

a. Clearly
b. With some understanding
c. Vaguely
d. Not at all
e. Cannot say

17. How did the Client appear at the conclusion of the interview.

a. Lost
b. Not fully satisfied
c. Satisfied
d. Don't remember

Comments: (Use other side, if necessary.)

Search Procedure Form

STEP ONE: DEFINE PROBLEM

STEP TWO: DERIVE GENERAL APPROACH

(CRITERIA)

SELECT RESOURCES

STEP THREE: DETERMINE SEARCH TERMS

Initial search terms: Added search terms:

(over)

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STEP FOUR: CONSULT RESOURCES

(SOME CRITERIA USED IN MAKING RELEVANCE JUDGMENTS)

REFORMULATE PROBLEM (?)

STEP FIVE: LIST CITATIONS

EIC_____

Transformation Checklist

Client: _____ Date Information Received: _____

Position: _____ Date Package Completed: _____

School/District: _____ Date Package Needed: _____

Address: _____ Phone: _____

1. Delivery Mode:

   ___Telephone ___Letter, Memo ___Direct

2. Package Utilization Aids Included:

   ___List of Contents ___Instructions for Use ___Other (Specify:)

   ___Description of Contents ___Suggestions for Review Priorities

3. Package Contents:

Item Selected				Format	Delivery Form			
Author/ Source	Title	Date	Type of Information		Micro-fiche	Photo-copy	Loan	Re-lease

Package prepared by: _____

The EIC/Client Communication Checklist

Notes on_____
(EIC's name)

Instructions. Observing others as they convey information they have gathered will sharpen your own communication skills. Heightened awareness of how others handle transactions of the type we have been studying will lead to more accurate perception of one's own performance under similar circumstances.

Familiarize yourself with this form before the EIC and Client begin. Listen carefully when information is exchanged and also observe the style with which the EIC communicates. Perhaps you will observe something you do not understand. Questions about techniques or comments about the progress of the interview may occur to you. Jot them down in the space provided. Do not let this distract you from observing, however.

After the interview is over, check the one response to each of the following questions which most closely approximates your observation of how and what took place during the EIC/Client communication interview.

During the communication interview, did the EIC. . .

1. Attempt to restate the client's problem?

   a. No, not at all
   b. Yes, made a brief attempt
   c. Yes, restated
   d. Do not know

2. Make reference to the "contract"?

   a. No, not at all
   b. Yes briefly
   c. Yes, clearly made reference
   d. Do not know

3. Explain the organization of the information in the client's "package"?

   a. Gave a good explanation
   b. Made some effort to explain
   c. Made no apparent attempt to explain
   d. Cannot say

4. Suggest ways to use the information?

   a. Not at all
   b. Only a few
   c. Some suggestions made
   d. Excellent suggestions made
   e. Cannot say

5. Explain the limitations of the packet?

   a. Gave a complete explanation
   b. Touched on the subject
   c. Made no mention
   d. Do not remember

6. Explain how client can obtain additional information?

   a. No explanation made
   b. Briefly mentioned other possibilities
   c. Explanation of other possible sources
   d. Cannot say

(over)

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7. Make evaluative judgment(s) about the quality of this specific packet?

   a. Yes, explicitly
   b. Yes, vaguely
   c. No, not at all
   d. Did not notice

8. State his level of competence to select, make judgments about relevance, and transform information?

   a. Clearly stated
   b. Mentioned briefly
   c. No mention made
   d. Cannot say

9. Offer additional help to client?

   a. No, did not offer
   b. Mentioned casually
   c. Made a definite offer
   d. Cannot say

10. Listen carefully to the client's questions?

    a. Paid close attention
    b. Seemed somewhat distracted
    c. Did not pay attention
    d. Cannot say

11. React positively to nonverbal communication from the client?

    a. Had a positive reaction
    b. Had an occasional reaction
    c. Had no reaction whatsoever
    d. Cannot say

12. Convey the information in a confident and believable manner?

    a. Yes
    b. Haltingly
    c. No
    d. Cannot make a judgment

13. Conduct the interview with ease?

    a. Yes
    b. Somewhat nervously
    c. No
    d. Cannot say

14. Did the extent and the depth of the search seem consistent with the client's request?

    a. Yes
    b. Apparently
    c. No
    d. Cannot say

15. Did the client express, verbally, satisfaction with the service he received?

    a. Yes
    b. With some apparent reservation
    c. No
    d. Cannot say

16. Did the client indicate dissatisfaction, nonverbally, concerning the service he received?

    a. Yes, strongly indicated
    b. Apparent dissatisfaction
    c. No indication
    d. Cannot say

Suggestions to the EIC for more effective communication:

The EIC/Client Communication Checklist

Notes on_____
(EIC's name)

Instructions. Observing others as they convey information they have gathered will sharpen your own communication skills. Heightened awareness of how others handle transactions of the type we have been studying will lead to more accurate perception of one's own performance under similar circumstances.

Familiarize yourself with this form before the EIC and Client begin. Listen carefully when information is exchanged and also observe the style with which the EIC communicates. Perhaps you will observe something you do not understand. Questions about techniques or comments about the progress of the interview may occur to you. Jot them down in the space provided. Do not let this distract you from observing, however.

After the interview is over, check the one response to each of the following questions which most closely approximates your observation of how and what took place during the EIC/Client communication interview.

During the communication interview, did the EIC. . .

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   a. No, not at all
   b. Yes, made a brief attempt
   c. Yes, restated
   d. Do not know

2. Make reference to the "contract"?

   a. No, not at all
   b. Yes briefly
   c. Yes, clearly made reference
   d. Do not know

3. Explain the organization of the information in the client's "package"?

   a. Gave a good explanation
   b. Made some effort to explain
   c. Made no apparent attempt to explain
   d. Cannot say

4. Suggest ways to use the information?

   a. Not at all
   b. Only a few
   c. Some suggestions made
   d. Excellent suggestions made
   e. Cannot say

5. Explain the limitations of the packet?

   a. Gave a complete explanation
   b. Touched on the subject
   c. Made no mention
   d. Do not remember

6. Explain how client can obtain additional information?

   a. No explanation made
   b. Briefly mentioned other possibilities
   c. Explanation of other possible sources
   d. Cannot say

(over)

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7. Make evaluative judgment(s) about the quality of this specific packet?

   a. Yes, explicitly
   b. Yes, vaguely
   c. No, not at all
   d. Did not notice

8. State his level of competence to select, make judgments about relevance, and transform information?

   a. Clearly stated
   b. Mentioned briefly
   c. No mention made
   d. Cannot say

9. Offer additional help to client?

   a. No, did not offer
   b. Mentioned casually
   c. Made a definite offer
   d. Cannot say

10. Listen carefully to the client's questions?

    a. Paid close attention
    b. Seemed somewhat distracted
    c. Did not pay attention
    d. Cannot say

11. React positively to nonverbal communication from the client?

    a. Had a positive reaction
    b. Had an occasional reaction
    c. Had no reaction whatsoever
    d. Cannot say

12. Convey the information in a confident and believable manner?

    a. Yes
    b. Haltingly
    c. No
    d. Cannot make a judgment

13. Conduct the interview with ease?

    a. Yes
    b. Somewhat nervously
    c. No
    d. Cannot say

14. Did the extent and the depth of the search seem consistent with the client's request?

    a. Yes
    b. Apparently
    c. No
    d. Cannot say

15. Did the client express, verbally, satisfaction with the service he received?

    a. Yes
    b. With some apparent reservation
    c. No
    d. Cannot say

16. Did the client indicate dissatisfaction, nonverbally, concerning the service he received?

    a. Yes, strongly indicated
    b. Apparent dissatisfaction
    c. No indication
    d. Cannot say

Suggestions to the EIC for more effective communication:

EIC Self-Evaluation Form

NEGOTIATION

1. Inferior: Does not adequately negotiate the client's problem in either written or oral form.

   Superior: Successfully negotiates client's problem and formulates a precise written and oral description to guide further analysis and information retrieval.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Misses the real purpose behind the client's request.

   Superior: Narrows down and pinpoints the real purpose of the client's request.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

RETRIEVAL

1. Inferior: Poorly develops search plan, creating problems with the search and summary procedures.

   Superior: Develops an efficient and comprehensive search plan.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Poorly assesses the contents of applicable documents, missing the information needs of the client.

   Superior: Accurately assesses the contents of the applicable documents fulfilling the client's need in terms of the negotiated problem definition.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

EIC Self-Evaluation Form

NEGOTIATION

1. Inferior: Does not adequately negotiate the client's problem in either written or oral form.

   Superior: Successfully negotiates client's problem and formulates a precise written and oral description to guide further analysis and information retrieval.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Misses the real purpose behind the client's request.

   Superior: Narrows down and pinpoints the real purpose of the client's request.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

RETRIEVAL

1. Inferior: Poorly develops search plan, creating problems with the search and summary procedures.

Superior: Develops an efficient and comprehensive search plan.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Poorly assesses the contents of applicable documents, missing the information needs of the client.

Superior: Accurately assesses the contents of the applicable documents fulfilling the client's need in terms of the negotiated problem definition.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

EIC Self-Evaluation Form

NEGOTIATION

1. Inferior: Does not adequately negotiate the client's problem in either written or oral form.

   Superior: Successfully negotiates client's problem and formulates a precise written and oral description to guide further analysis and information retrieval.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Misses the real purpose behind the client's request.

   Superior: Narrows down and pinpoints the real purpose of the client's request.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

RETRIEVAL

1. Inferior: Poorly develops search plan, creating problems with the search and summary procedures.

Superior: Develops an efficient and comprehensive search plan.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap

2. Inferior: Poorly assesses the contents of applicable documents, missing the information needs of the client.

Superior: Accurately assesses the contents of the applicable documents fulfilling the client's need in terms of the negotiated problem definition.

[ ]	[ ]	[ ]	[ ]	[ ]
Inferior	Below Average	Average	Above Average	Superior

Action Needed to Close the Gap